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TECHNIQUES OF INVESTIGATION FOR ASSESSMENT

Vol 5

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Techniques of Investigation for Assessment

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Foreword

As the financial ecosystem is evolving and changing rapidly, the tax authorities are required to keep themselves abreast with the latest developments in the field of tax investigations. There has been a seminal change in the way in which financial transactions are carried out. Owing to that, the methodology to track and analyse such transactions from the perspective of a tax investigator has also undergone a drastic change. In this backdrop, a need was felt to revise the existing ***'Manual on Techniques of Investigation',*** which was last released in the year 2002.

The scope of the updated and revised Manual is to give the officers of the Income-tax Department an overview of the modern techniques of investigations. Two volumes of the revised Manual have been finalized. The chapters highlight the issues, legal position and techniques which the departmental officers can use to investigate the case and to tackle tax evasion.

Volume–V of the Manual contains, in all, 20 chapters covering industries such as Tyre Industry, Paper Industry, Gutkha Industry, Rubber Industry etc. and focuses on the industry specific data, manufacturing processes, types of books of accounts/ other documents maintained, latest modus operandi of tax evasion, applicability of other laws.

I would like to place on record my special appreciation for the efforts of all the members of the Committee and other officers associated with the mammoth task of rewriting this Manual. I hope, this Manual will act as a useful reference point for the officers of the department while conducting inquiries and investigations.

(Pramod Chandra Mody)
Chairman and Member (Investigation)(A/C)
Central Board of Direct Taxes

New Delhi
Date: 26/06/2020

Preface

The Board had constituted a Committee on 27/11/2017 to review and update the departmental publication of "Techniques of Investigation Manual" (Vol. I to Vol. V) 2002. The need for the same had arisen from the fact that the earlier publication was more than 16 years old. The new series of 'Techniques of Investigation' is an effort to sensitize and educate the officers to effectively equip them with the requisite skill set. The Committee decided to bring the manual in seven volumes. The Committee has great pleasure in bringing out the present Volume V of the Manual which contains various topics covering industries/ sectors such as Co-operative Sector, Dairy Industry, Coffee Industry, Leather Industry etc. as mentioned in the table of "CONTENTS". The work involved re-writing the existing chapters by incorporating the refinements undergone in old methods of tax evasion and by incorporating the changes in the statute and the procedures.

The basic principles of taxation are as old as organised human society. Several ancient civilisations, including the Greeks and Romans, levied taxes on their citizens to pay for military expenses and other public services. Taxation in India is rooted from quiet early period. The celebrated poet Kalidas in his epic poem Raghuvansa has said:

> *"It was only for the good of his subjects that he collected taxes from them, just as the sun draws moisture from the Earth to give it back a thousand fold."*

However, the human tendency to avoid paying taxes was also known to exist from earlier times, people had started using certain avenues to avoid payment of taxes. Thus the role of the tax administrators became crucial in ensuring that every eligible person must pay tax correctly. The provision of investigation in the existing Income-tax law is an important aspect. These investigative powers coupled with information gathering tools form the backbone of any judicious assessment order.

Nowadays businesses have witnessed significant technological advancements. They have adopted technology, resulting in change in the methods and manner of doing business. As a result, the scope and meaning of investigation has also changed. The internet, perhaps the most important achievement of mankind, has made practically all information available to us in no time. Investigation today has to match with the fast pace of technological developments and the technological infrastructure of the Income-tax department is playing a significant role. The Tax Authorities have to scale themselves up to meet the newer challenges posed to them in the form of digital transactions of business affairs.

The Government has recently taken various initiatives to unearth the black money *viz.* Demonetization, Revamping the Benami Transactions Act, bringing in various amendments in respect of reporting cash transaction and transactions over a particular threshold, mandatory quoting of PAN, etc. It is now the responsibility of the Tax Officers to use the information and authority under the law to enforce payment of correct taxes else the key steps undertaken by the Government to enhance the tax compliance would be rendered futile.

It can be seen that this volume covers various industries such as Cashew Industry, Seafood and Aquaculture, Liquor Trade, Forest Exploitation, Timber & Plywood Industry etc. and each such industry has different gamut of its operations with varied types of processes involved from the stage of input of raw materials to the end product. The 'team' has undertaken untiring efforts to collect latest data, details of processes, latest modus operandi of tax evasion employed in each such industry/ sector and has incorporated all these things in the respective chapters of this volume.

The chapters are not an exhaustive list of techniques of investigation as the tax avoidance and evasion practices are quite diverse and dynamic in nature. However, it intends to highlight and guide the officers and make them aware about the existing provisions of law and techniques that they can apply independently to tackle the tax evasion issue in the facts and circumstances of the particular case. We attempted to utilize the earlier and newer investigation techniques to address the issue of tax avoidance and evasion in the complex digital business space. It is hoped that officers in the field find this book useful and make best use of the intended knowledge sharing while solving cases of tax evasion effectively.

The Committee acknowledges the effort of all the officers who have contributed material and made value addition for compilation of this Volume. We are also grateful to the Editorial Board for going painstakingly through the write-ups and for their valuable inputs.

Ajai Das Mehrotra
Chairman of the Committee

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CHAPTER 1

Cashew Industry

1. INTRODUCTION

1.1 India is the largest producer of raw cashew nuts in the world. The total area under cashew cultivation in the country during the financial year 2017–18 was 10.41 Lakh hectares and the production of raw cashew nuts was 8.17 Lakh MT. Also, India is the biggest exporter of cashew kernels in the world. Other major exporting countries are Brazil, Vietnam, Indonesia, Mozambique and Kenya.

1.2 Cashew industry is a traditional industry of Kerala. It is a major foreign exchange earner for the state. As foreign exchange earner, cashew stood fifth amongst the agricultural products exported from India during 1998–99. There is a concentration of cashew factories in Kollam (Quilon) district of the state. The town is the biggest cashew centre in the country. Almost all major cashew manufacturers are headquartered here. There are a few factories in Thrissur (Trichur), Kozhikode (Calicut) and Kannur (Cannanore) districts of the state, though. Certain others are in the neighbouring states-near Mangalore (Karnataka), Rajahmundry (Andhra Pradesh) and Kanniakumari (Tamilnadu). The industry is highly labour-intensive.

1.3 Cashew is a seasonal industry. Raw cashew nut season in India starts by mid-January. It is over by June. Even if some small quantities are received in July, they are of poor quality due to rains. A good chunk of raw cashew nuts (RCNs) required for our factories is being imported. The imports in the year 2017–18 were 6,49,050 MTs valued at Rs. 8850.03 crore. Tanzania is the major exporter of nuts to India. Till the season starts in India, the industry is sustained by imports from Tanzania where the season starts by October end.

1.4 The system of marketing of raw nuts differs from state to state. In Kerala, generally, the government imposes restrictions, and the procurement is made by the state agency namely, the Kerala State Marketing Federation. The cultivators are required to sell only to the federation. Due to this restriction, a part of the production is smuggled to the neighbouring states like Tamilnadu and Karnataka. In those states there is no procurement and the nuts fetch much higher prices.

1.5 Export of cashew kernels totalled 84.343 Lakh MTs in 2017–18. It brought foreign exchange equivalent of Rs. 5870.97 crore per annum. The USA continued to be the biggest importer of cashew kernels from India and 45% of Indian exports is to the USA. Other major importers of Indian cashew kernels are the Netherlands, Japan, the UK and the UAE. Foreign exchange is also earned through export of cashew shell oil (also known as cashew shell liquid) which is a by-product.

***Statistics Sourced from CEPCI and DGCI&S, Kolkatta*

2. PROCESSING OF RAW NUTS

2.1 Raw nuts are generally processed in factories licensed by the State government. The raw nuts procured from local and interstate markets and those imported are transported to the processing centres by Lorries-either own or hired. Before processing, the raw nuts are dried in the drying yard. Generally the yard is maintained at the head office. As the work is managed by employees only, proper records are maintained at the head office wherein both shortage and driage are recorded. But these registers are not produced before the income-tax authorities on the pretext that such registers were not maintained. Such registers are found during surveys and search operations.

2.2 The unit for processing is the 80 kg bag of raw nuts. The raw nut imported is on the basis of tonnage. It is received generally in bags of uneven weight. The nuts purchased from Indian markets are generally in 80 kg bags. The nuts brought in gunny bags are unloaded in the drying yard for drying and after drying they are repacked into 80 kg bags and sent to the factories for processing. The shortage and the driage are ascertained at this stage and they are recorded in the stock register at the head office, or at the drying yard if drying is made at a place other than the head office. Claim of shortage and driage upto 5% is reasonable.

2.3 The processing is essentially manual. The different stages of processing are roasting, shelling, peeling, grading and packing. Roasting is made in drum-type roasting machines. The roasted raw nuts are transferred for shelling, 3 to 4 hours after roasting. Shelling is the removal of the hard outer shell with the help of a specially made wooden piece. The shell is used as fuel in domestic kitchens, tile factories etc. By peeling, the brown coloured thin inner layer is removed and the kernel is obtained. Different grades of kernels are sorted out by grading. Packing is the last stage of processing. The graded kernels are packed in tins and filled with carbon dioxide. Generally the kernels are packed in 25 lb (11.34 kgs) tin. For local sales the packing is either 1 kg or 500 grams tin or polythene bag. A case (also known as carton) contains two 25 lb tins. Exports are made in cases.

2.4 The quality of cashew in the international market is determined by the size, shape and colour of the kernels. The different grades of cashew kernels are the following:

W-180-		White Whole
W-210-		White Whole
W-240-		White Whole
W-320-		White Whole
W-450-		White Whole
SW	-	Scorched Wholes
SSW	-	Scorched Whole Seconds
DW	-	Deserted Wholes
B	-	Butts
S	-	Splits
LWP	-	Large White Pieces
SWP	-	Small White Pieces
BB	-	Baby Bits
SP	-	Scorched Pieces
SS	-	Scorched Splits
SSP	-	Scorched Small Pieces
DP	-	Deserted Pieces

The abbreviation W-180 stands for Wholes 180 which means that 180 kernels will weigh one pound. Similarly W-210 means that 210 kernels will weigh one pound and so on. The output (production) of W-180 and W-210 varieties-which are big and valuable-is relatively low. The yield of big kernels depends on the size of the raw nut. They are generally obtained from the raw nuts from Kerala.

3. MARKETING OF KERNELS

3.1 Cashew kernels are sold through exports, local sales, interstate sales and consignment sales. Exports are effected through ships. Kernels are transported to the ports through lorries. With the introduction of the container system, the kernels for shipments are now transported through containers to the port and shipment is made along with the containers. For sales in India kernels are transported through lorries.

3.2 By virtue of Section 80HHC the export profits are deductible while computing the taxable income. The issues connected with the deduction are the same in this industry as in other export cases. As respects the other kinds of sales, apart from the issues peculiar to the cashew industry, there are issues which are common to all businesses.

4. TAX INVESTIGATIONS

4.1 Investigation of Accounts: The accounts of a cashew business should be checked for the following:

a. Suppression of closing stock of raw nuts and kernels.

b. Rolling of unaccounted cash for purchases.

c. Excess claim towards driage and shortage of raw nuts.

d. Suppression of production and unaccounted sales.

5. SUPPRESSION OF CLOSING STOCK

5.1 For the sake of convenience, raw nut purchases are converted to 80 kg bags before processing. The manufacturers file quantitative details and output statement with reference to 80 kg bags. Output (production) of kernels between 45 to 47 pounds per bag of raw nuts is treated as good (2.204 lb = 1 kg). There were instances of output of even 48 lb. Though the processor gets weekly statements from factories in which the number of bags of raw nuts processed and the actual production of kernels there from are noted, these statements are not produced before the AO. Output per bag is generally worked out by the assessees as under:

Table 1

Sales of Kernels Closing stock **Total**	1,25,000 lb 40,000 lb **1,65,000 lb**
Less: Opening stock of kernels Purchases	17000 lb 33000 lb **50,000 lb**
Production during the year	1,15,000 lb
Output per bag (supposing that 2500 bags have been processed)	1,15,000/ 2500 = 46 lb

As the output is derived as above, verification of actual production is difficult. By making a slight reduction in the output per bag (say 43 lb per bag) in the output statement, suppression of closing stock of raw nut is possible. In this way production can also be suppressed. Suppression of closing stock of raw nuts is made by treating a part of the last period purchases also as processed by the end of the accounting year. Factually it may not be so. A part of such purchases is shown as closing stock. There are instances where stock of raw nuts in transit was found to be more than what was shown in closing stock. The production of kernels from such suppressed raw nuts is adjusted by reducing the output per bag which is only a hypothetical figure. While examining the issue relating to the correctness or otherwise of the closing stock, it is worthwhile

to take note of that in the case of imported raw nuts, the consignment may take relatively more time to reach the factory from the date of the Bill of Entry. With the introduction of container system, the imported raw nuts reach the factory early. Another point to be noted is that it takes a minimum of 8 days for the roasted raw nuts to be ready for sale.

5.2 Suppression of Closing Stock of Raw Nuts Can be Unravelled in the Following Ways

As rawest are transported in lorries, delivery notes and vouchers for unloading contain relevant information. These documents at least in respect of the last period purchases should be verified. The date on which the lorry crossed the Sales Tax/ commercial-tax checkpost is available in the purchase bill and the delivery note.

In respect of imported raw nuts, the bill of entry and the clearance issued by the Customs Department should be verified. The correspondence issued by the clearing agent for the transportation of such goods gives a clear indication regarding the actual date of lifting of the raw nuts from the port, lorry number, weight of raw nut loaded in each lorry etc.

Scrutiny of the key-loan register of the bank will be fruitful. As the stock under key-loan is physically verified by the bank officials and periodical releases are made only in their presence, the correctness of the key-loan statement can be relied on. In respect of other loans like open loan, cash credit loan etc. the correctness of the stock statement given by the exporter is not verified by the bank and even the stock position as on the last day of the accounting year may not be available with the bank.

During their inspections the Sales Tax/ commercial-tax officials take possession of the stock registers for raw nuts in the factory and the head office, the registers maintained at the packing Section, the factory day books etc., if they find discrepancies. These registers give information regarding the number of bags of raw nuts processed, closing stock of raw nuts available at the factory and at the head office, the number of filled tins of cashew kernels available etc. The records in the custody of these authorities should be scrutinised.

5.3 Suppression of closing stock of kernels is sometimes attempted. Here also the statements given by the assessee before the Sales Tax/ commercial-tax authorities in the course of their assessment proceedings and the books and papers taken by them during the course of their inspection is helpful. Reference to such documents is helpful. Verification of stock statements furnished to the banks is also strongly advised.

5.4 Another area for investigation is suppression of closing stock of kernels ready for export. The shipping documents for export are:

a. Export bills raised by the exporter.

b. Bill of lading signed by the captain of the steamer, or by the shipping agent.

c. Export inspection certificates issued by the Export Inspection Agency (now replaced by the independent surveyor's certificate).

The export bill contains the shipping marks (the marks put on the carton containing the kernels), number of cases of kernels (a case = 2 tins @ 11.34 kg.), grade of kernels, name of the buyer, name of vessel etc. The same details appear on the inspection certificate and the bill of lading.

5.5 Part stock of kernels which has already been inspected by 31st March or the last day of the accounting year will be there in the form of closing stock, and the same will be exported during the next April. Verification of the export bills for the next April with the respective inspection certificates issued by the Export Inspection Agency (now replaced by independent surveyor's certificate) will give an indication as to how much kernels already inspected before 31st March have been used for export after 1st April. In certain cases, it has been found that the quantity of closing stock of kernels disclosed as at 31st March was less than the quantity already inspected before 31st March but used for export

after the said date. The bill of lading shows the date on which the cargo was shipped on board.

5.6 A manufacturer - K and Co - had disclosed in its tax return closing stock of kernels at 4500 lb. for A.Y. 1985–86 (Y.E. 31/12/1984). A scrutiny of the export bills and the respective bills of lading for A.Y. 1986–87 revealed that two lots of cashew kernels weighing to 47500 lb valued at Rs. 11.11 lakhs which had already been shipped on board on 31/10/84 and on 10/12/84 were not accounted for as sales or as closing stock for the assessment year 1985–86. They were not included in the closing stock as on 31/12/1984. The closing stock disclosed was only 4500 lb. When this was pointed out with irrefutable proof, the assessee accepted the fact of suppression of closing stock and revised the statements enhancing the closing stock by 47500 lb.

5.7 Local purchase of raw nuts and kernels using own bought-notes is prevalent in this industry. It is likely that suppressed stock of raw nuts and kernels would be accounted as purchases in the next year either of raw nuts or of kernels, thereby creating a bogus debit.

6. ROLLING OF UNACCOUNTED CASH FOR PURCHASES

6.1 As stated above, the season for rawest in India is January-June. The manufacturers try to effect maximum possible purchases during this time. Sometimes accounted cash may not be available for the purchases actually effected. Therefore, they record these purchases as made in the subsequent period of the same accounting year when sufficient cash balance is available. A peculiarity of such purchases is that they are mostly on cash basis on the strength of self-prepared bought-notes. His manipulation can be detected by computing the monthly availability of kernels from the opening stock, the purchases and the production from the accounted purchases of raw nuts. If the quantity of kernels sold is more than the availability, it is clear that the excess quantity sold has been obtained either from unaccounted purchases of kernels or from the processing of unaccounted purchases of rawest.

6.2 Scrutiny of factory books is useful for verification of unaccounted purchases of rawest. In certain cases the number of bags of raw nuts that have passed through different stages of processing are noted down. If the number of bags so processed is more than the accounted raw nuts, the inescapable conclusion is that the excess has come from unaccounted purchases by rolling unaccounted cash.

6.3 Scrutiny of the factory day book and ledger of a cashew exporter from Kollam, for the financial year 1980–81 revealed that he had processed 2711 bags of raw nuts in excess of the accounted quantity. The factory books disclosed that the following bags of raw nuts have passed through different stages of processing between 1.4.80 and 21/03/1981 as against the recorded availability of 10,219 bags out of opening stock and accounted purchases upto 21/03/1981.

Roasting - 12,930 bags

Shelling - 12,930 bags

Peeling - 12,204 bags

Grading - 12,114 bags

The entries in the factory cash book and ledger showed that the assessee had processed more raw nuts than the quantity reflected in the books of accounts (slight difference in the number of bags peeled and graded is due to overlapping in stages of processing). An addition of Rs. 19.79 lakhs under the head other sources towards the money invested in the excess stock of raw nuts was made. It was substantially upheld in appeal.

7. EXCESS CLAIM TOWARDS SHORTAGE AND DRIAGE

7.1 Shortage and driage upto 5% are considered normal. If the assessee's claim is more than that, the AO should get alerted. He should call

for the stock records especially from the drying yard. Almost all cashew manufacturers maintain pucca stock registers. Contemporaneous entries for driage and shortage of raw nuts are made in these registers as and when they are noticed. These registers are never produced before the AO. Some pretext or the other is given. They can be obtained only through coercive means like a survey or search under Sections 133A or 132 or an inspection by sales tax authorities.

7.2 A cashew manufacturer from Kollam claimed excess driage by a simple trick in the conversion of raw nuts from tonnes to 80 kg standard bags. If correctly converted, the driage (224.301 MT) would work out to 2,804 bags only as against 9,817 bags claimed in the quantitative particulars. The driage claimed (9817 bags) worked out to 11.59% of the current year's purchases. For the current year there were certain short weight claims on shipping and transit losses. In respect of short weight, claims were made against the seller and for transit loss, claim had been filed before the insurance company. The Settlement Commission has allowed the claim for shortage and driage at 4% of the total quantity as reduced by the quantity for which claims have been filed. The excess quantity claimed as shortage and driage has been treated as unaccounted sales. In effect, the Commission sustained the addition to the tune of Rs. 45 lakhs.

8. SUPPRESSION OF PRODUCTION AND UNACCOUNTED SALES

8.1 As stated earlier, output of kernels ranging between 45 and 47 lb per bag of raw nuts is normal. Poor quality of rawest may affect the output to a certain extent. If the output is abnormally low, say 43 lb, the case should be scrutinised in depth. The low output can be due to suppression of production. The assessee then should be required to substantiate the low output with the help of stock register. If the claim is not substantiated, addition can be made to make good the deficiency in the output. Corresponding addition for unaccounted sales should also be considered.

8.2 A manufacturer at Kollam had disclosed the total output (including rejection quality) at 44.12 lb for AY 1993–94 as against 47.18 lb disclosed for AY 1992–93. He contended that the low output was due to poor quality of raw nuts. However, he did not produce the stock register claiming that no day-to-today stock register was maintained. The AO adopted the output at a higher rate, and taxed the difference in quantity as suppressed sales. The CIT (Appeals), relying on the decision of Supreme Court in *Chhabildas Tribhuvandas vs. CIT* (59 ITR 703), rejected the assessee's explanation for the lower output. But he restricted the enhancement in the output to 0.86 lb. The difference in quantity was treated as sold outside the books. In this process, addition to sales to the tune of Rs. 10,38,000/- was sustained.

8.3 In another cashew case, the CIT (Appeals) sustained a similar addition (AY 1993–94). In this case, the purchase rate of the assessee was higher than that of other exporters whereas the output (yield) percentage was lower. After considering these comparable cases, the AO fixed the yield at 24.95% on the consumption reported by the assessee. The difference in production was treated as unaccounted sales, and an addition of Rs. 17,26,530/- was made. The CIT (Appeals) fixed the yield at 23.41% and reduced the addition to Rs. 5,88,880/-.

9. CONCLUSION

The cashew industry has many features which are common to all industries. It has several peculiar features also. The AO should be familiar with both to conduct meaningful investigations. Now that Section 80HHC is on its way out, the tendency to manipulate accounts may go up. Alertness on the part of the AO is needed to tackle such misadventure.

CHAPTER

2

Coffee Industry

1. INTRODUCTION

1.1 Coffee is grown in various parts of the world with the areas being distributed within a narrow belt, roughly 25° north and south of the equator known as the "Bean Belt". Cultivation of coffee has special climatic requirements. Suitable rain fall, temperature, altitude and soil are its four natural needs. The average rainfall required is about 45 inches, and the mean annual temperature about 70°F. The coffee plant flourishes best on highlands at altitudes ranging between feet 4500 and 6500 feet.

1.2 The major coffee producers in the world are Brazil, Vietnam, Columbia and Indonesia. In India, coffee is mainly cultivated in the southern states of Karnataka, Kerala, Tamilnadu and Andhra Pradesh and in some parts of Assam and Odisha. According to the 2017 statistics published by the Coffee Board of India, the area of green coffee harvested in India was 3,52,644 hectares forming a total production estimate of 3,12,000 metric tonnes.

1.3 As per a recent estimate, there are approximately 250,000 coffee growers in India, 90% of who are small growers. Over 90 per cent of them are small farms consisting of 10 acres (4.0 ha) or fewer. The most important areas of production are in the southern states of Karnataka, Kerala, and Tamil Nadu which accounted for over 96% of India's coffee production in the 2018–19 growing season.

1.4 There are different varieties of coffee. The most commonly grown are Coffee Arabica and Coffee Canephora (Robusta) coffees. The latter is grown at lower altitudes. It is harder and has a better yield per plant than the Arabica. In terms of exports, Robusta garners 70% of total exports whereas the balance is contributed by Arabica. A graphic representation of both varieties is as under:

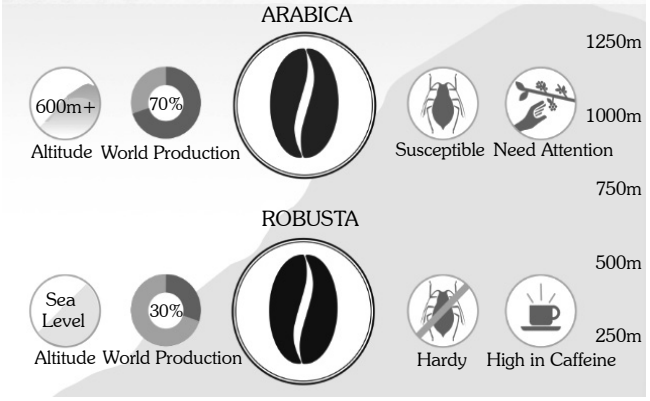


Fig. 1

1.5 All coffee grown in India are grown in shade and commonly with two tiers of shade. Often inter-cropped with spices such as *cardamom, cinnamon, clove,* and *nutmeg,* coffee gains aromatics from the inter-cropping, storage, and handling functions. Growing altitudes range between 1,000 m (3,300 ft) to 1,500 m (4,900 ft) *above sea level* for *Arabica* (premier coffee), and 500 m (1,600 ft) to 1,000 m (3,300 ft) for *Robusta* (though of lower quality, it is robust to environment conditions). Ideally, both *Arabica* and *Robusta* are planted in well-drained soil conditions that favour rich organic matter that is slightly acidic (pH 6.0–6.5). However, India's coffees tend to be moderately acidic, which can lead to either a balanced and sweet taste, or a tasteless and inert one. Slopes of *Arabica* tend to be gentle to moderate, while *Robusta* slopes are gentle to fairly level.

1.6 The coffee harvest calendar is confined to a few months each year, being from November to January for the Arabica variety, and December to about April for Robusta, these being the commercial varieties of coffee that are cultivated. When the coffee seed is planted in different soils, altitudes and climates, it acquires different tastes and characteristics including aroma & taste. As such, coffees grown in various parts of the world vary from one another in both appearance and flavour.

2. A VARIANT IN COFFEE

2.1 Chicory Coffee: It is a beverage made using the roots of the chicory plant, which are roasted, ground and brewed into a coffee-like drink.

2.2 Chicory is a flowering plant in the dandelion family that is characterized by a tough, hairy stem, light purple flowers and leaves that are commonly used in salads.

2.4 Chicory coffee tastes similar to coffee but has a flavour that is often described as slightly woody and nutty.

2.5 It's used either on its own or mixed with coffee to complement its flavour.

2.6 Although the history of chicory coffee is not entirely clear, it's believed to have originated in the 1800s in France during a massive coffee shortage.

2.7 Desperate for a similar substitute, people began mixing chicory roots into their coffee to get their coffee fix.

2.8 Years later during the Civil War, it also became popular in New Orleans, when the city experienced a coffee shortage after Union naval blockades cut off one of their ports.

2.9 Today, chicory coffee can still be found in many parts of the world and is often used as a caffeine-free alternative to regular coffee.

3. GOVERNMENT CONTROL AND REGULATION

The industry was under Government controls till 1996. Way back in 1942, the Government decided to regulate the export of coffee and protect the small and marginal farmers by passing the Coffee VII Act of 1942, under which the Coffee Board of India got established, under the Ministry of Commerce and Industry. The government significantly increased their control on coffee exports in India and resorted to pooling of coffee produce of its growers. The industry flourished significantly in India after 1991 economic liberalization and the industry took full advantage of this. In 1993, the Internal Sales Quota (ISQ) was introduced by which coffee farmers were allowed to sell 30% of their production within India. This was further amended in 1994 when the Free Sale Quota (FSQ) permitted large and small-scale growers to sell between 70% and 100% of their coffee either domestically or internationally. A final amendment in September 1996 unshackled the industry by providing the freedom to the producers and traders to sell their produce wherever they wished. Now, the industry is

entirely outside the controls of the Government. With liberalization, the farmer is incentivized to produce high-quality coffee depending on the demand in the world market.

4. COFFEE PLANTATION

4.1 Broadly speaking, coffee making operations can be divided into two parts—agricultural operations and manufacturing operations.

4.2 Coffee can be propagated by seed as well as by means of cloning. Coffee in India is mainly propagated through seeds. This method is simple and easy to adopt by growers. Use of quality seeds plays an important role in establishing a productive plantation. The seeds are usually picked from the research department. The agricultural operations are similar to those carried on for other plantation crops. Coffee bushes take 3–4 years for maiden crop (blossoming) and 6–7 years for producing economic yields. The crops at initial years are stripped off in order to have optimum yield at a later stage. The coffee harvest calendar is confined to a few months each year, being from November to January for the Arabica variety, and December to about April for Robusta; these being the commercial varieties of coffee that are cultivated. The fully ripe fruits are only hand-picked. These are sorted out according to the quality of the fruit. Fruits which are not fully ripe before the end of the harvesting season are of inferior quality. These are stripped off, completely dried and sent to curing works separately.

4.3 In India, over a period of 68 years from 1951 till 2018, one can observe that the area under cultivation for coffee has gone up from 92,523 hectares in 1951 to 454,722 hectares in 2018. During this period the area under cultivation for Arabica coffee as percentage of total area has decreased from 73% in 1951 to 50% in 2018, whereas the area under cultivation for Robusta coffee has gone up from 27% in 1951 to 50% in 2018.

4.4 Today (2018) we observe that Arabica coffee, despite covering 50% of the soil in India for production produces only 30% of the volume (tonnage) and in value terms it is 39% ($256 million worth of Arabica coffee at 135 cents per pound) and the rest is Robusta coffee which is 61% ($388 million worth of Robusta coffee at 88 cents per pound).

4.5 It is no surprise that growing Arabica coffee is dragging Indian coffee sector behind when it comes to optimally utilizing its resources (land and labour).

4.6 If we observe closely the productivity of a Arabica coffee farm land is decreasing (from 1971 to 2018). India witnessed increased productivity of Arabica soil from 229 kg per hectare in 1951 to 725 kg per hectare in 1971 and since then it has decreased gradually and today (2018), despite mechanization and the best in class technology available, Arabica soil in India produces 478 kg of coffee per hectare.

4.7 At the same time Robusta soil's productivity has gone up gradually from 136 kg per hectare in 1951 to 1031 kg per hectare in 2018.

5. AN OVERVIEW OF PRODUCTION, LABOUR AND EXPORTS, IN INDIA

The broad overview of productions, labour and exports are as under:

Table 1: Statewise Productivity 2017–18

State	Area, Hectares	Production, Ton	Labour	Labour Productivity, Tons/ Labour	Labour/ Hectare	Productivity, kg/Hectare
Karnataka	226,244	222,300	514,695	0.4	2.3	983
Kerala	84,976	65,735	44,194	1.5	0.5	774
Tamil Nadu	33,613	17,440	31,274	0.6	0.9	519

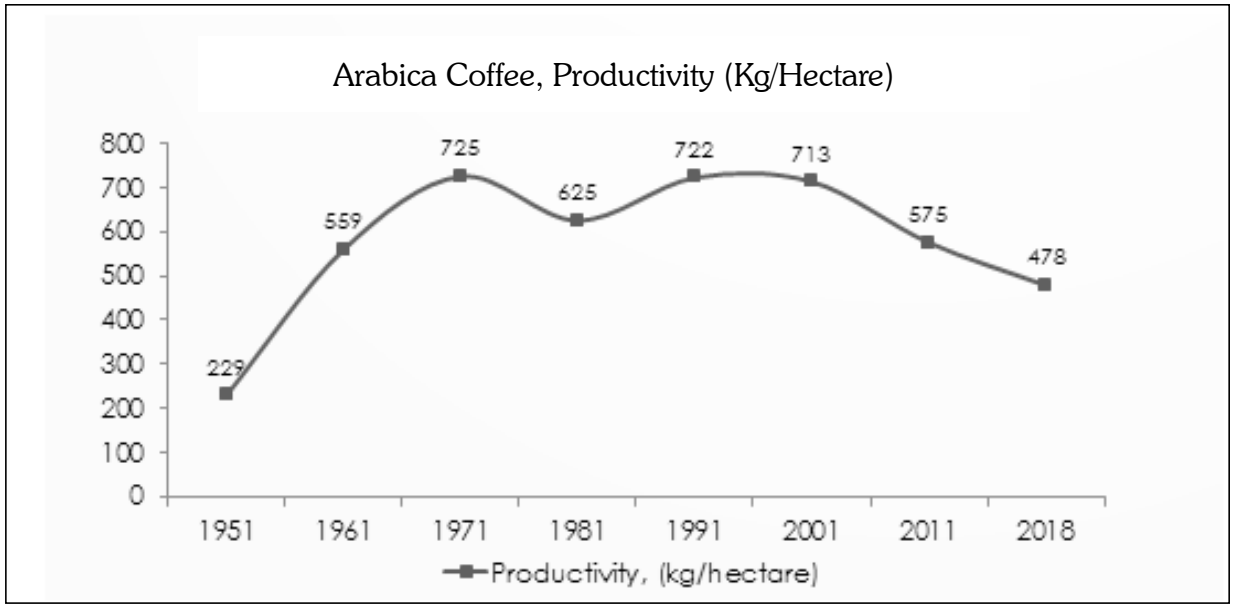


Fig. 1

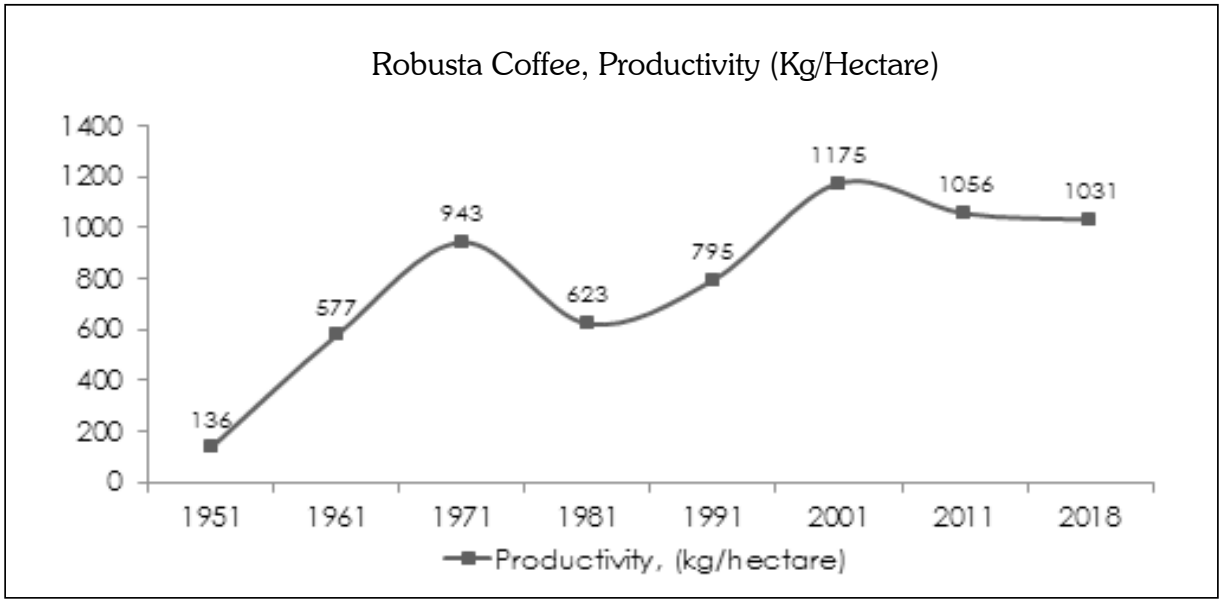


Fig. 2

Table 2: Indian Coffee Sector-Area, Production & Productivity

Planted Area, Hectares

Year	1951	1961	1971	1981	1991	2001	2011	2018	Growth%
Arabica	67,613	70,650	80,433	109,454	127,934	167,679	197,930	228,910	2%
Arabica%	73%	59%	59%	53%	47%	48%	49%	50%	
Robusta	24,910	49,670	55,030	98,815	142,887	179,037	206,715	225,812	3%
Robusta%	27%	41%	41%	47%	53%	52%	51%	50%	
Total	92,523	120,320	135,463	208,269	270,821	346,716	404,645	454,722	2%

Table 3

Coffee Production, by Type

Year	1951	1961	1971	1981	1991	2001	2011	2018	Growth%
Arabica	15,511	39,526	58,348	61,262	78,311	104,400	94,140	95,000	3%
Arabica%	82%	58%	53%	52%	46%	35%	31%	30%	
Productivity (Kg/Ha)	229	559	725	625	722	713	575	478	
Robusta	3,382	28,643	51,883	57,384	91,415	196,800	207,860	221,000	6%
Robusta%	18%	42%	47%	48%	54%	65%	69%	70%	
Productivity (Kg/Ha)	136	577	943	623	795	1175	1056	1031	
Total	18,893	68,169	110,231	118,646	169,726	301,200	302,000	316,000	4%

Table 4: Labour Wages Prevailing in Different States 2018–19

State	Karnataka	Kerala	Tamil Nadu	Andhra Pradesh	Odisha	Arunachal Pradesh	Assam	Mizoram	Tipura
Wages (INR per Day	314	326	299	222	213	267	244	270	201

Major Indian Coffee Exporters

Exporterwise Export of Coffee, 1st January 2018 to 25th October 2018
Arabica @ 135 cents per pound & Robusta @ 88 cents per pound 1 ton = 2000 pounds

Table 5

Name of Exporter	Arabica (Tons)	Arabica (USD)	Robusta (Tons)	Robusta (USD)	Instant Coffee (Tons)	Roasted Coffee (Tons)	Total (Tons)
CCL	-	-	-	-	39,000	0	39,000
ALLANASONS Private Limited	10,719	28,941,300	12,622	22,214,720	-	12	23,353
Olam Agro India Private Limited	3,105	8,383,500	17,640	31,045,400	-	-	20,745
MKG India Coffee Private Limited	3,114	8,407,800	16,307	28,702,032	-	-	19,421
Coffee Day Global Limited	4,771	12,881,700	14,494	25,509,440	12	5	19,282
TATA Coffee Ltd	1,805	4,873,500	3,472	6,110,720	12,477	-	17,754
NED Commodities India Pvt Ltd	2,523	6,812,100	13,001	22,881,760	-	-	15,524
EMIL Traders Pvt Ltd	-		13,796	24,280,960	-	-	13,796
SLN Coffee and Spices Exports	1,287	3,474,900	10,013	17,622,880	-	-	11,300
Ecom Gill Coffee Trading	2,712	7,322,400	8,251	14,521,760	-	-	10,963
Others	18,073	48,797,100	50,906	89,594,560	46,370	256	1,15,605
Total	48,109		1,60,502		97,859	273	3,06,743

Major Export Destinations for Indian Coffee Producers

Coffee Exports by Country-During 1st January 2018 to 25th October 2018

Table 6

Country	Arabica (Tons)	Robusta (Tons)	Instant Coffee (Tons)	Roasted Coffee (Tons)	Total (Tons)	Percentage Exports
Italy	6,999	63,127	312	0	70,438	23
Germany	657	18,393	642	1,428	25,616	8
Russian	859	3,452	13,948	1.5	18,261	6
Belgium	7,770	8,469	669	0	16,910	6
Indonesia	31	198	12,716	0	12,945	4
Poland	49	2,275	10,588	0	12,913	4
Turkey	136	794	11,567	-	12,498	4
Malaysia	9	110	8,729	2	8,851	3
Jordan	5,775	2,602	162	0	8,541	3
Spain	426	5,966	952	0	7,345	2
Others	19,476	55,116	37,569	268	112,431	37
Total	48,109	160,502	97,854	273	306,749	1

Table 7: Coffee Consumption in India

Year	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018	Growth%
Quantity Consumped (Tons)	60,000	68,000	75,000	85,000	94,400	108,000	115,000	120,000	125,000	130,000	4%

***The data is sourced from alphainvesco.com.*

6. PROCESSING OF COFFEE

6.1 Coffee processing removes the fruit from the seed. Skin, pulp, parchment, and silverskin slough off to reveal a beautiful bean. Ranging from pale yellow to pale green, if bitten, the bean gives slightly bitter taste.

6.1.1 Washed (Or Wet) Process: Where water is plentiful, the cherries are usually passed through a pulping machine, sorted by weight, and deposited in a fermentation tank. Here, naturally occurring enzymes dissolve the pulp until it can be washed from the bean, a process that takes 12 to 72 hours depending on many factors such as temperature and humidity. Once fermented, the washed coffee, still in its parchment (filmy, paper-like covering) is spread out to dry until it reaches around 11% moisture content. At this point, the seed is stabilized and won't germinate.

6.1.2 Natural (or Dry) Process: Where water is not as readily available, freshly-picked cherries are spread out on tarps, patios, and even sometimes along the road for the fruit to dry in the sun. Reaching optimal moisture content can take weeks. Throughout this drying process, the coffees are regularly turned with rakes to ensure even drying.

6.2 Drying: If the coffees received from the planters are found to be under dried, they will be dried at the curing works to bring down the moisture content. The accepted moisture level is 11%.

6.3 Hulling, Grading and Garbling: The raw coffee is first passed through a stone/ stick eliminator, where foreign materials like stone, twigs, sticks, etc., are removed. Then the coffee

is passed into the huller/ peeler-cum-polisher and from there on to the horizontal or vertical winnower. The coffee is next allowed into the pregrader, where the bits are separated. It then passes through the graders, where the different grades of coffees such as PB, A, B and C are separated. Thereafter, the coffee is subjected to garbling/ sorting, out turning, bulking, etc. The cherry coffees are hulled using hullers and the parchment coffees are peeled using peelers. Primary grading is carried out based on the size of the beans. This is carried out by a rotary grader. Secondary grading is done based on densimetric classification of the individual grades using catadors and gravity separators.

6.4 Garbling and Sorting: The sorting of defective and discoloured beans is carried out manually and also by using electronic colour sorting machine. After the garbling process, the coffee lot is out turned and the quantity of each of the grades weighed and recorded.

6.5 Bulking, Packing and Storage: The different types of coffee cured and out turned separately are bulked based on the region of growth. The plantation coffee out turns are bulked based on the cup test groupings decided by the tasters. The bulking operation is carried out manually or using bulking machines. Double gunny bags are used for packing cured coffee. The cured coffee is stored according to the storage norms fixed by the Board.

6.6 Roasting and Powdering: The cured coffee is roasted at a particular temperature to give a rich taste and aroma. It is then powdered. Now it is ready for consumption. The accepted processing loss under this stage is 18–20%. The curing loss of Arabica Plantation and Robusta Parchment is 18–20% and for unwashed cherry it is 47–49%. The accepted output percentage of Arabica Plantation after curing is as follows:

Plantation "A"	55–60%
Plantation "B"	15–20%
Plantation "A"	12–18%
Peabury	8–12%
Bits & Black	2–5%

6.7 The stages in dry & wet processing is shown as under:

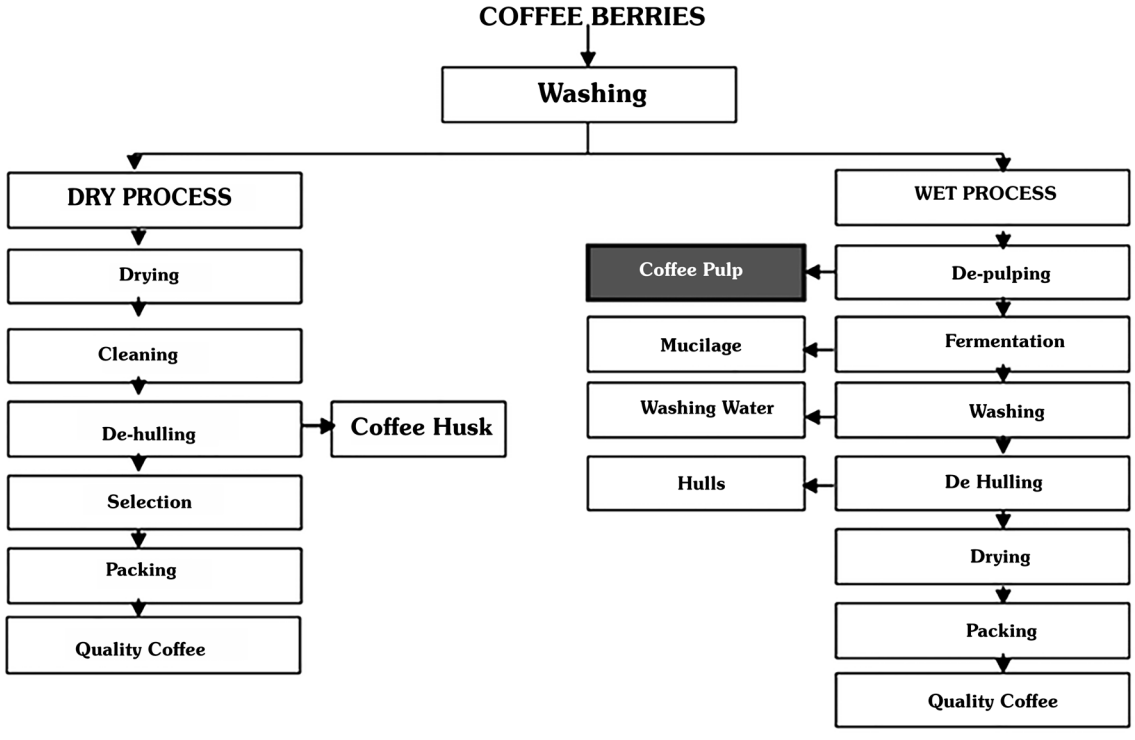


Fig. 3

7. EXPENSES IN A CURING CONCERN

7.1 The expenses in a coffee curing concern can be broadly classified as under:

a. Purchase of uncured coffee
b. Transport cost
c. Brokerage-procurement commission
d. Labour cost
e. Power
f. Repairs and maintenance
g. Packing materials
h. Tax on Interstate purchases
i. GST
j. General expenses

7.2 Transport Cost: Transport cost varies directly with the distance between the coffee estate and the curing/ roasting factory. It also varies if the estates are situated at higher altitudes like Valparai and Shervaroys. Costs are bound to be less for relatively lower altitudes like Chikmagulur. Hence there is no uniform transport cost. The AO should keep this factor in view while deciding the reasonableness of the cost.

7.3 Cost of Machinery: Machines are normally fabricated according to the requirements. Depending on the method and stages, the cost of machinery may vary. Major manufacturers of such machines are in Germany, England and Russia.

7.4 Invisible Loss: The visible waste arising from the curing process is 'husk' which is used as fuel by some other industries. The invisible loss during curing process is between 5–10% due to moisture and weighment difference. Invisible loss, occurring at the time of roasting, ranges between 18–20%.

8. BOOKS AND REGISTERS

8.1 It is imperative to know the important books and registers maintained by the companies engaged in curing business. The main registers are the raw coffee stock inward register and the output register. In the former, the purchase of raw coffee is entered item wise. The quantity issued for curing is also noted in this register. In the latter, the quantity of coffee cured after passing through various stages of processing such as drying, hulling, grading, garbling and sorting, is entered.

8.2 The AO should take all routine steps in the case of a coffee concern as he would take in the case of any manufacturing concern. He should do all usual checks in regard to profit and loss account and Balance Sheet items.

9. TAX INVESTIGATIONS: POINTS TO REMEMBER

9.1 Application of Rule 7B

9.1.1 Coffee industry has been accorded special status in the Income-tax Act, 1961; perhaps due to its importance for the Indian economy. Rule 7B of the Income-tax Rules, 1962, outlines a special method by which income from sale of coffee should be computed. It has got two limbs:

9.1.1.1 The Sub-rule (1) to Rule 7B provides that income derived from the sale of coffee grown and cured by the seller shall be computed as if it were income derived from business but only 25% of such income shall be deemed to be the income liable to tax.

9.1.1.2 The Sub-rule (1A) to Rule 7B provides that income derived from the sale of coffee grown, cured, roasted and ground by the seller, with or without mixing chicory or other flavouring ingredients, shall be computed as if it were income derived from business but only 40% of such income shall be deemed to be the income liable to tax.

9.1.2 The Rule also states that for computing the income due allowance shall be given to the cost incurred for planting the coffee plants, either as a replacement or for planting in areas which had become useless.

9.1.3 This Rule is for only those sellers who have grown and/ or manufactured coffee, as the case may. The AO should not lose sight of the fact that in order to claim profit ratio as per this Rule, the primary requirement is that the assessee should be a grower of coffee. A ratio of 25%/ 40% would be applied to the net profit arrived after allowing all costs, to compute the taxable income from coffee business. As a corollary, it can be deduced that the provisions of Rule 7B is not applicable to traders of coffee.

9.1.4 In the cases of assessees who have incomes from both from growing and trading in coffee, the assessees may not maintain separate P&L accounts for both activities and show the total income accruing from coffee growing business. The AO should inspect sales register, purchase register, sale bills, and purchase bills (In case of trading) before arriving at any conclusion. Form 3CD may also give a clue whether the assessee is involved in trading activity or not. The AO also call for a list of all finished products and a process chart (Flow Chart) to ascertain whether the assessee falls in 25% (sub-rule 1) or not.

9.1.5 In some cases, it is possible that the assessees, a coffee grower, may let out its manufacturing plant & machineries to third parties in spare time in lieu of which the assessees may receive rent. Such rent received on account of letting out of plant & machinery may be claimed as part of composite income by the assessees thereby claiming 75%/ 60% income of the rent under Rule 7B as exempt agricultural income. In such cases, the coffee grown is not on land owned by the assessee nor the same belongs to the assessee and hence, there cannot be any component of agricultural income in the hands of the assessee so as to qualify the rental income on letting out plant and machinery to be eligible for treating as part of composite income. Such rental income is directly related with the use of plant and machinery and has no direct connection with agricultural activity or income of the assessee and needs to be treated separately out of the composite income under Rule 7B.

9.1.6 Other Incomes: Rule 7B does not apply to an income that is not related to coffee business, e.g. income by way of interest on loans advanced by coffee growing concerns.

10. PURCHASES

10.1 Coffee trading was under the control of Coffee Board till 1994. Once it became free trade, the small estate owners resorted to tax evasion by selling their produce outside the books, thus avoiding agricultural income-tax. As mentioned earlier, in India, the coffee harvest calendar is confined to a few months each year, being from November to January for the Arabica variety, and December to about April for Robusta, these being the commercial varieties of coffee that are cultivated and therefore logically, the purchase of raw coffee would fall within the above months. The AO may look for purchasing pattern i.e. large purchases booked in August of fresh raw coffee beans, then such purchases should be taken up for detailed examination.

10.2 It is a normal practice for small estate owners to sell the raw coffee beans to the big coffee companies and from the purchase ledgers of such companies, the sales made by small estate owners can be verified, as such estate owners may not disclose all such sales in their books of account.

11. SALES

Coffee being a volatile commodity with day to day fluctuations, the AO should compare the prevalent market rate of a particular variety with the admitted sale price. It has to be understood that different varieties have a different price at different times. For instance, high altitude coffee grown in Babubudanagiri hills has a different aroma & taste and comes with a premium, as compared to other varieties. It may be borne in mind that the export market is highly regulated by international spot prices which are available online, which can be used to compare the prices disclosed by the tax payer. Secondly, it is important

to understand that the prices mentioned in the Coffee Board website correspond to average prices and therefore, may not reveal the exact prices which the tax payer might have realised in the market. Hence, care should be taken to understand the taxpayer's portfolio of different grades of coffee and arrive at prices grade wise and day wise, for verification.

12. EXPORTS

Around 70% of coffee cultivated is exported out of India. These export rates are determined by London & New York market rates, which in turn depend on different grades of coffee. Earlier some of the exporters used to indulge in under-invoicing their exports. A common practice was to setup dummy exporters to divert the export profits. Concealment through under-invoicing of exports can be detected if the:

a. contract between the exporter and the buyer is studied.

b. rates as per contracts are tallied with the prevailing market rates.

c. rates in the aforesaid documents are tallied with sales invoices.

d. quantity mentioned in GR Forms as sent is tallied with sales invoices.

13. CLOSING STOCK

The AO may examine quantitative details of opening stock, production/ purchases, issues, sales and closing stock of raw materials, finished products and stores. The basis of valuation of closing stock, in respect of each item separately should be in accordance with Section 145A of the Act and the relevant Accounting Standard. The valuation of closing stock now is as per FIFO method. The AO should check these aspects. The discussion on stock manipulations appearing elsewhere in this manual may be perused.

14. CONCLUSION

India is one of the major producers of coffee in the world. It exports nearly 70% of the output. With an estimated US$ 454.59 million in exports for FY 2017–18, coffee industry in India is growing significantly and it is important to understand the various stages of coffee processing and the international markets, which drive & decide the rates for different grades of coffee. The AO should also be familiar with blending of coffee with chicory flavour and make an attempt to ascertain the actual cost incurred by the assessee for such process including procuring of raw material, process cost, wastages, if any etc.. In the GST era, the coffee, whether roasted or unroasted, coffee husk and skin attract GST rate of 5% and coffee beans do not attract any GST. Considering that the invisible loss, in the form of husk and skin is around 18–20%, the AO can fairly compute coffee production with GST data. As can be seen from the foregoing paras, as per Rule 7B of IT Rules, the business income from growing coffee is taken at 25% or 40% as the case may be. The remaining income is treated as income from agricultural activity. In the case of P Chidambaram, his income from coffee growing activity was initially treated as income from agricultural activity and the entire income was exempted from tax. However, at a later date, his case was reopened and part income from such activity was brought to tax in terms of Rule 7B. A good understanding of these points would arm the AO to identify and verify the factual issues associated with the industry and further, help in unearthing the various modes of tax evasion, adopted by the assessees.

CHAPTER

3

Co-operative Sector

1. INTRODUCTION

1.1 The International Co-operative Alliance, whose membership includes co-operatives from all parts of the world, has defined a co-operative as:

> "A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise".

As per Income-tax Act, 1961 'Co-operative Societies' are defined under Section 2(19) as under:

> "Co-operative Society" means a co-operative society registered under the co-operative Societies Act, 1912 (2 of 1912), or under any other law for the time being in force in any State for the registration of co-operative societies:

1.2 Co-operatives May Include

a. Non-profit community organisations.

b. Businesses owned and managed by the people who use their services (a consumer co-operative).

c. Organisations managed by the people who work there (worker co-operatives).

d. Organisations managed by the people to whom they provide accommodation (housing co-operatives).

e. Hybrids such as worker co-operatives that are also consumer co-operatives or credit unions.

f. Multi-stakeholder co-operatives such as those that bring together civil society and local actors to deliver community needs.

g. Second-and third-tier co-operatives whose members are other co-operatives.

1.3 The Co-operative Sector is not at par with the corporate sector in relation to the management, staff personnel, accounting systems of internal control, internal audit or the statutory audit. It also differs in profitability. The Co-operative organisations normally embrace various fields of activities like banking, manufacturing, marketing, housing etc. The co-operative institutions in various fields include:

a. Banking and Credit Co-operative Societies
b. Sugar Co-operative Societies.
c. Spinning and Weaving Co-operative Societies.
d. Primary Industrial Societies.
e. Consumer Co-operative Stores.
f. Dairy Co-operatives.
g. Agricultural Produce Marketing Co-operatives.
h. Salary Earners' Co-operative Societies.

1.4 The co-operative idea took a concrete shape in India for the first time in 1904, when the Co-operative Credit Societies Act was passed. Later, in 1912, the Co-operative Societies Act, provided for the registration of non-credit societies as well as federations of co-operatives. It was a Central Act. It gave a comprehensive law as to the formation, working and management of the societies apart from the provisions relating to accounts, audit and investment of funds.

1.5 By the Government of India Act, 1915 the subject of Co-operation was conferred to the States and they were to enact their own law to regulate the activities of Co-operative Societies with reference to the basic principles and structure of the Central Act with regard to the Co-operative Organisations. The States have passed their own laws and rules regulating the activities of the Co-operative movement which are, by and large, in consonance with the recommendations of Raja Committee of 1956 that drafted a model bill, rules and by-laws. The Gujarat Co-operative Act, 1961 is similar to the Maharashtra State Co-operative Act.

To cater to the societies functioning in more than one state, the Multi-State Co-operative Societies Act, 1984, came into operation from Sept. 16, 1985, which was later on replaced by "The Multi-State Co-operative Societies Act, 2002".

1.6 All the enactment, by and large, are based on the following principles of co-operative movement and the laws regulating them:

a. Voluntary and open membership.
b. Democratic control of members.
c. Economic participation of members.
d. Autonomy and independence.
e. Education, training and information.
f. Co-operation among Co-operatives.
g. Concern for community.

2. MANAGEMENT

The management of the Co-operative Societies empowers active participation and control by the Members. In view of its concept, there is democratic management in which the General Body of the Members is supreme. It is the General Body that elects the Board of Directors or the Members of the Management Committee. Each member has one vote regardless of his share holdings. The pattern of management of Co-operative Societies is generally as under:

Table 1

Members	**General Body**	
Top Management	**Board of Directors**	**Elected by General Body**
	Middle management	
	Departmental committees	
	Manager-Secretary	
	Chief Accountant	
	Accountants	
	Other employees	

2.1 The Managing Committee generally elects the Chairman, who is in-charge of the general administration. In a manufacturing concern there may be a post of Managing Director and in the Urban Bank and other Societies, there may be a post of Secretary. The functions of the Management Committee are:

a. Proper custody and maintenance of movable and immovable properties belonging to a society.
b. Proper maintenance of accounts relating to receipts and payments of a society, through its accounting staff.

c. To summon and attend all the meetings including Annual General Meeting. To record the proceedings of the meetings in proper minute book.

d. To keep all the necessary registers and records required by the Co-operative Societies Act and Rules and bye-laws of the society.

2.2 System of Audit and Accounting: The role of an Auditor in the Co-operative Societies has to be more positive and cautious as the Auditor has to oversee the pattern of management, fixation of responsibilities, examining the Minute Books with reference to the important policy decisions, functions of the various sub-committees with reference to the work allotted to them etc. The Auditor has also to oversee the provisions of by-laws, etc. in relation to the accounts and audit matters and also to confirm whether or not the activities of the society conform to the rules and by-laws of the Society which in turn have to conform to the provisions of Central and State Co-operative enactment.

2.3 Section 65 of the Maharashtra State Co-operative Societies Act contains provisions relating to maintenance of accounts which are (in) conformity with the normal accounting standards. The net profit has to be ascertained after taking into account following charges:

a. Interest accrued on overdue loans.

b. Establishment charges.

c. Interest payable on loans and deposits.

d. Audit Fees.

e. Working expenses of the Society.

f. Repairs, rent and taxes.

g. Depreciation on fixed assets.

h. Bonus payable to employees under Payment of Bonus Act, 1965.

i. Equalization fund for such bonus.

j. Provision for payment of Income-tax if any payable after claiming appropriate relief, under Section 80P of the Income-tax Act.

k. Provision for making approved donation under the Act.

l. Provision for contribution to education fund.

m. Development rebate.

n. Provision for development fund.

o. Bad debt fund, price fluctuation fund.

p. Provisions for retirement benefits to employees and in case of co-operative consumers stores, provision for rebate on purchases.

q. Bad debts and losses not adjusted against any fund.

r. Dividend equalization fund, Share capital redemption fund and Investment fund.

2.4 Method of Accounting

There is no specific provision in the Co-operative Societies Act with regard to the method of accounting. The societies are thus free to adopt either mercantile or cash system of accounting. However, the method adopted by the society must be consistently followed every year. Appropriation of profits is generally subject to the provisions enshrined in the relevant Co-operative Societies Act. Similar provisions exist in Chapter-VI of Gujarat Co-operative Societies Act, 1961 and Maharashtra Co-operative Societies Act. Section 6 of the Gujarat Act provides for the appropriation of funds in the following manner:

i. A Society earning profit, shall calculate its annual net profits by deducting from the gross profits for the year, all accrued interest which is overdue for more than six months, establishment charges, contributions, if any, towards the provident fund and gratuity fund of its employees, interest payable on loan and deposits, audit fees, working expenses including repairs, rents, taxes and depreciation, and after providing for or writing off bad debts and losses not

adjusted against any fund created out of profits. A Society may, however, add to the net profits for the year, interest accrued in the preceding year (not accounted for in that year) but actually recovered during the year. The net profits thus arrived at, together with the amount of profits brought forward from the previous year shall be available for appropriation.

ii. A Society may appropriate its profits to its reserve fund or any other fund created by it for payment of dividends to members on their shares, to contribution to the educational fund of such federal Co-operative society as the State Government may by notification in the Official Gazette specify as '' the Gujarat State Co-operative Union'', to the payment of rebate on the basis of support received from members and person who are not members to its business and subject to the prescribed conditions to payment of honoraria, and to any other purpose which may be specified in the rules or bye-laws. However, no part of the profits can be appropriated except with the approval of annual general meeting and in conformity with the Act, rules and bye-laws.

2.5 Section 68 restricts the distribution of the dividend to the Members at a rate not exceeding 15% of the profit. Section 67 provides for the creation of statutory fund as permanent reserve fund in which 25% of the net profit has to be added every year subject to a minimum of 10% with the permission of the Registrar having regard to the financial condition of the society. The Reserve Fund has to be invested as per provisions of Section 71 as follows:

a. in a Central Bank, or the State Co-operative Bank, or

b. in the State Bank of India, or

c. in the Postal Savings Bank, or

d. in any of the securities specified in Section 20 of the Indian Trust Act, 1882, or

e. in shares, or security bonds, or debentures, issued by any other Society with limited liability, or

f. in any co-operative bank or in any banking company approved by the Registrar, and on such conditions as the Registrar may from time to time impose, or

g. in any other mode permitted by the rules, or by general or special order of the State Government.

In addition to the aforesaid appropriation of profit, Section 69 provides for the contribution to Education fund of the Gujarat Co-operative Union and also contribution for a public purpose.

2.6 According to Section 65 of the Act, which deals with the ascertainment of profits, amounts transferred to Dividend Equalization Reserve, Share Capital Redemption Fund are stated as charges against profits. According to generally accepted principles of accountancy, though, these items are not the charges but appropriations of profits.

2.7 Bonus Equalisation Fund has to be created out of net profits and it is to be utilised only for payment of bonus to members and non-members. According to the standard bye-laws of a Society, a Sinking Fund is required to be created from the collections made from members for the purpose of providing the depreciation on completed building. The rate of sinking fund to be collected is 0.5% of cost of flat of each member every year. It has to be specifically invested and should not be utilised in the working of the society. Interest on sinking fund should be credited to the fund and has to be reinvested.

3. BOOKS OF ACCOUNT

3.1 There are no specific provisions relating to maintenance of books of accounts and records by a Co-operative society either under Multi State Co-operative Societies Act, 2002 (MSCS Act) which has replaced Central Co-operative Societies Act of 1984 and applicable, at present,

to all the co-operative societies having operations in more than one state or different co-operative societies Acts enacted by State Governments. However, the books of accounts are required to be audited by an auditor every year. For instance, Section 70 of MSCS Act provides that every multi state Co-operative society shall get its account audited by an auditor as defined under Section 70(2) of the Act at least once in each year. Likewise, Section 84 of Gujarat Co-operative Societies Act, 1962 also prescribes such provisions. It has further been provided in Section 70 of the MSCS Act that the auditor shall have a right of access, at all times, to the books, accounts and vouchers of the co-operative society and shall be entitled to seek from the officers or other employees of such co-operative society any information or explanation as he may require in the course of discharge of his duties as an auditor. In this regard, the Assessing Officer should examine the auditor's report to verify whether any qualifications have been made by the Auditor in the course of his audit with reference to the provisions listed under Section 70(2) of MSCS Act. Further, as per the provisions of Sub-section s (3), (4) & (5) of Section 70 of the MSCS Act. The Auditors shall furnish report as to whether the Balance Sheet and the Profit & Loss Account as well as every other document required to be part or annexed to such documents provide a true and fair view for the Financial Year under consideration. Such audit includes an examination of overdue debts, if any, and a valuation of assets and liabilities of the society. The Registrar will authorise any person to conduct the audit of the Society on his behalf by an order and the person so appointed shall have right at all times to have access to the books of accounts, papers and securities of the Society. He shall have access to the books of accounts, papers and securities of the Society. He shall have a right to ask information and conduct an inspection in relation to audit. Similar provisions are also found in the respective State Co-operative Acts as well.

Moreover, as per Section 108 of MSCS Act, 2002, the books of accounts and other books and papers of every multi State Co-operative Society shall be open to inspection by the Central Registrar or by such officer of the Government as may be authorised by the Central Government in this regard. As per Section 109 of this Act, at every AGM the Board is required to present before Multi State Co-operative Society members a Balance Sheet and a Profit & Loss Account for the financial year. This makes it clear that although no method of accounting has been prescribed by the co-operative Act, nonetheless, they are required to maintain the books of accounts as well as Balance Sheet and profit & loss account.

3.2 Books of Accounts for Co-operative Credit Societies

Under Section 82 of the Gujarat Co-operative Societies Act(Corresponding Section 79 of the Maharashtra Co-operative Society Act), the Registrar has been given the powers to direct the co-operative society to maintain the books of accounts with respect to money received, and expenses expanded by the Society, the record of all the sales and purchases of goods by the society, assets and liabilities of the society etc. The same can be summarized as under:

i. All sums of money received and expended by the society and the matters in respect of which receipts and expenditure take place.

ii. All sale and purchase of goods by the society also on account of stock-in-hand.

iii. Assets and liabilities of the society.

Thus, the Co-operative Societies are required to broadly maintain following books of accounts:

1. Day books.
2. Payment book for loan advances.
3. Sundry payment book (other than loans).
4. Receipts & payments book for Fixed Deposit Receipts.

5. Sundry receipt book.
6. Dividend payment book.
7. Members register.
8. Share ledger Form (Rule 32 & 65).
9. Fixed deposits personal ledger.
10. Balance book for F.D.R.
11. Due register for F.D.R.
12. Unpaid dividend register.
13. Recoveries register for advances.
14. Summary book for recoveries.
15. F.D.R. due Interest register.
16. Suspense register.
17. Sundry creditors register.
18. Surety deposit account book.
19. Surety liability register.
20. Journal.
21. Bank reconciliation book.
22. Trial balance book.
23. Demand and time liability register for 3% & 28%.
24. Yearly balance book for loans, shares and M.R.B.F. account for personal balance.
25. Particulars for loan bond, after payment.
26. Register for loan applications (Head office).
27. Register for loan applications (Branches).
28. Sanctions register for loan, for membership, for share refund.
29. Minutes books.
30. General body meetings.
31. Managing committee meetings.
32. Index books of branches.

3.3 Books of Accounts for Consumers Co-Operative Societies

1. Cash book.
2. Cash sales subsidiary book.
3. Credit sales register.
4. Purchase book.
5. Stock register.
6. Bin-cards for item-wise upto date quantity records.
7. Register of excess and shortages.
8. General ledger.
9. Debtors ledger, Creditors ledger.
10. Journal proper.
11. Register of tenders.
12. List of approved suppliers.
13. Register of Market Rates.

3.4 Books of Accounts for Credit Co-Operatives

1. Main Day book.
2. General ledger.
3. Trial balance.
4. Cash reserve & liquid assets register.
5. Cashiers scroll.
6. Transfer scroll.
7. Cheque books issue register.
8. Monthly balancing register.
9. Current O/ D register.
10. Total loan liability register.
11. Godown inspection register.
12. Loan application register.
13. Mortgage register.
14. Membership application register.
15. Share call in arrears register.
16. Share register & share ledger.
17. Token register, cash in safe/ vault register.

4. TAX INVESTIGATIONS

4.1 Assessment of Co-operative Societies

It may be stated here that though for taxation purposes, the status of a society is to be taken

as an AOP, Sections 67A and 86 of the Act have been specifically excluded from application to the case of its members. Besides, as provided in Part I of the First Schedule to an annual Finance Act, a co-operative society is taxed at rates, which are different from those applicable to an AOP. It may be seen from Part I of the First Schedule to an annual Finance Act, wherein though individuals, Hindu Undivided Family, AOPs or Body of Individual, whether incorporated or not, or every artificial juridical person referred to in Section 2(31) (vii) of the Act, are chargeable at the rates prescribed under paragraph B thereof.

4.2 Wealth-Tax Liability on a Co-operative Society

As per Section 3(1) of the Wealth-tax Act, 1957, only individuals, HUF and companies are liable to wealth-tax. It clearly implies that no wealth-tax is chargeable in the case of co-operative society. However, at present, the Wealth Tax Act has been repealed by the Finance Act 2015 with effect from F. Y. 2015–16. Therefore, the same is not applicable to any class of assessees.

4.3 Concept of Mutuality not Applicable to Co-operative Societies: (Judicial View)

a. There is no aspect of mutuality in the case of the assessee registered under the Co-operative Societies Act, as one of the objectives of a co-operative society was to make profits and declare dividends to its members. In the case of a mutual concern, there is no room for such intention of making profit and distribute the same among the members. *(Totgar's Co-operative Sale Society Ltd. vs. ITO* (2010) 322 ITR 283 (SC); 229 CTR 209*)*.

b. The Hon. Andhra Pradesh High Court in the case of *CIT vs. Secunderabad Cricket Club* (2012) 21 Taxmann.com 54 (A.P. HC.) vide Para 34 has held that, "… with respect to any transaction of business nature, having a motive of profit, the concept of mutuality will not apply and transaction would be liable to Income-tax".

4.4 Deduction under Section 80P

4.4.1 While handling an issue relating to deduction under Section 80P(2) of the Income-tax Act in a case of a Co-operative society, it would be useful to keep in mind the following general observation of the Supreme Court made in the case of *Kerala State Co-operative Marketing Federation Ltd. vs. CIT* (231 ITR 814, 819*)*:

> "The provision is introduced with a view to encouraging and promoting the growth of the Co-operative sector in the economic life of the country and in pursuance of the declared policy of the Government, the correct way of reading the different heads of exemption enumerated in the Section would be to treat each as a separate and distinct head of exemption. Whenever a question arises as to whether any particular category of an income of a Co-operative society is exempt from tax what has to be seen is whether the income fell within any of the several heads of exemption. If it fell within any one head of exemption, it would be free from tax notwithstanding that the conditions of another head of exemption are not satisfied and such income is not free from tax under that head of exemption."

4.4.2 The provisions have categorised various activities of the Co-operative societies with reference to the eligibility and extent of deduction "from the profits and gains of business attributable to any one or more of such activities" where 100% deduction is eligible. Legal controversies normally had arisen on account of the fact that the Co-operative society may carry on business to earn income part of which is exempted and part of which is not exempted. If separate books of accounts are not maintained and the expenses are incurred jointly, the AO has to allocate the related expenses to the income of exempt and non-exempt activities in order to ascertain the correct income chargeable to tax. It is to be allocated on pro-rata basis. It is settled by the Supreme Court in 203 ITR 1027:

> ''when the assessee co-operative society's income is included in its total income, it becomes entitled to a deduction from the amount of income-tax chargeable on its total income. That means, the Co-operative society concerned becomes entitled to deduction or exemption from income-tax payable by it only on its net amount of profits and gains, i.e. on income of its business otherwise computable in accordance with the provisions of the Income-tax Act for the purpose of charging income-tax thereon and which is included in its total income, and not on the amount of its gross profits and gains of business''.

4.4.3 The effect of the above judgment is that deduction under Section 80P is admissible with reference to net income and not the gross income. This decision was followed by the Gujarat High Court in *Gandevi Taluka Khedut Sahkari Mandali Ltd. vs. CIT* 207 ITR 175. While dealing with the provisions of Section 80P (2) (d), it was held by the Gujarat High Court that the deduction is admissible in respect of the net income by way of interest or dividends derived by the Co-operative society from its investment, if any, in other Co-operative society. A reference was also made to the case of *CIT vs. Surat District Co-operative Milk Producers Union Ltd.* 211 ITR 726.

4.5 Effect of Insertion of Sub-section (4) to Section 80P in the Act

A Co-operative society can claim deduction under Section 80P. However, with effect from AY 2007–08 onwards, no such deductions are available to any co-operative bank (other than a primary agricultural credit society or a primary co-operative agricultural and rural development bank) by virtue of Sub-section (4) to Section 80P. Even, Regional Rural Banks cannot claim any deduction under Section 80P-Circular No.6/2010, dated September 20, 2014. Also, State co-operative bank, Central co-operative bank and a primary co-operative bank cannot claim any deduction under Section 80P. However, primary agricultural credit society (whose principal business is to provide financial accommodation to its members for agricultural purpose or for purpose connected with agricultural activities including the marketing of crops) or a primary co-operative agricultural and rural development bank can claim deduction under Section 80P. Likewise, a credit co-operative society (which is not credit co-operative bank) can claim deduction under Section 80P–*CIT vs. Surat Vankar Sahkari Sangh Ltd.* (2014) 225 Taxmann 156 (Guj).

4.6 Income from Banking Business [Section 80P(2)(a)(i)]

A co-operative society (which is engaged in carrying on the business of banking or providing credit facilities to its members is eligible to claim the following income as deduction under Section 80P(2)(a)(i).

1. Income from carrying on banking business for its members.
2. Income from providing credit facilities to its members.

4.6.1 Providing Credit Facilities to Members

Deduction under Section 80 P (1)(a)(i) is available to those co-operative societies that are engaged in providing credit facilities strictly to their members only.

Members – meaning of—In Section 80P(2)(a)(i), when Parliament has used the expression 'members" it has used it in the normal sense of a member of a co-operative society. The intention was to extend the exemption to co-operative societies directly extending credit facilities to its members. There is nothing in the said provisions to show that intention was to grant exemption to co-operative societies which were extending credit facilities to the person who though not the members of the said society, were members of another co-operative society which was a member of the co-operative society seeking exemption. The meaning of the expression 'members' cannot, therefore, be extended to include the members not a primary co-operative

society, which is a member of the federated co-operative society seeking exemption–U.P. *Co-operative Cane Union Federation Ltd. vs. CIT* (1999) 237 ITR 574/103 Taxmann 376(SC).

4.6.2 When Section 80P(1)(a)(i) refers to a co-operative society engaged in providing credit facilities to the members, it really refers to a credit society whose primary object is to provide loans or other credit facilities to its members, it does not include any society whose primary object is something other than the provision of loans or other credit facilities, such as a consumer *co-operative Society—Rodier Mill Employees Co-op Stores Ltd. vs. CIT(Mad)* 135 ITR 355.

4.7 A few instances of income held/ not held as deductible under Section 80P(2)(a)(i) are given below:

i. Selling goods on credit – The facility of settling goods on credit to members is an activity of business of selling of goods, of which the credit facility is only an incidence it will not amount to providing credit facilities in the nature of the business of banking so as to amount to carrying on the business of banking or providing credit facility to its members–*CIT vs. Co-operative Supply & Communication Shop Ltd.* (1993) 204 ITR 713 (Raj*), CIT vs. Kerala State Co-operative Marketing Federation Ltd.* (1998) 234 ITR 301 (Ker).

ii. Chit Fund – Conducting chit fund amounts to providing credit facilities–*CIT vs. Kottayam Co operative Bank Ltd.* (1974) 96 ITR 181 (Ker.).

iii. Hire-purchase – Co-operative society, found to be engaged in business of purchasing auto-rickshaws and re-selling them to its members on hire-purchase terms. In this case, Apex Court has held that assessee cannot be considered to be engaged in carrying on business of providing credit facilities to its members, so as to be entitled to exemption under Section 80P(2)(a)(i) (2001) 117 Taxmann 370 (SC) *Madras Auto Rickshaw Drivers' Co-operative Society vs. Commissioner of Income-tax.*

iv. Service charges for loan agreement—Where the assessee-society had been carrying on business of providing facilities to its members for obtaining fertilizers etc. as also arranging loans from bank by giving certificates about cultivated land. etc., for which certain amount was charged as service charges such service charges received by the assessee would not be eligible for deduction under Section 80P(2)(a)(i)—*CIT, vs. Anakapalli Co-op Marketing Society Ltd.* (2000) 111 Taxmann 702/245 ITR 616 (AP).

v. Interest on funds not immediately required for business purpose: If a society regularly earns interest on funds (not required immediately for business purposes). Such interest income is taxable under Section 56 under the head "Income from other sources' and not eligible for deduction under Section 80P—*Totgars Co-operative Sale Society Ltd. vs. ITO* (2010) 188 Taxmann 282 (SC).

vi. Categorization of Society as per Co-operative Societies Act is relevant – Assessee is not a credit society as per Co-operative Societies Act – Interest received from providing credit facilities to its members not eligible for deduction *under Section 80P(2)(a)(i) ITO vs. Modern Engineers Construction Co-operative Society (ITAT, Chennai)* 11 ITR (Trib.) 393.

vii. Interest received on PF deposits and rental income from house property not eligible for deduction under Section 80P(2)(a)(i) as in the case of *Bihar Rajya Sahkari Bhoomi Vikas Co-operative Bank Ltd. vs. CIT (Patna)* 313 ITR 247.

viii. Service charges received from members for arranging loans in banks – Not eligible for deduction *under Section 80P(2)(a)*

(i). CIT vs. Anakapalli Co-op Marketing Society Limited (AP) 245 ITR 616.

ix. Hon'ble Supreme Court in its latest judgement (2017) 88 taxmann.com 279 (SC) Citizen *Co-operative Society Ltd. vs. Assistant Commissioner of Income-tax, Circle 9(1), Hyderabad*, has held that:

"Where assessee society was engaged in activity of finance business and was also engaged in activity of granting loans to general public as well, it could not be termed as co-operative society meant only for providing credit facilities to its members, hence not entitled to deduction under Section 80P."

4.8 Another issue involved with regard to the deduction of profits attributable to the activities of the society specified under Section 80P(2) is whether the business loss or depreciation of earlier years are required to be set off against the current year's profits. The Supreme Court has settled the issue in the case of *CIT vs. Kotagiri Industrial Co-operative Tea Factory Ltd.* 204 ITR 604. It is held that the gross total income has to be determined first by setting off against the income, the business loss and unabsorbed depreciation of the earlier years, and the deduction under Section 80P will be allowable in respect of the balance income.

4.9 Co-operative Sugar Mills

4.9.1 Assessee was a federated co-operative society consisting of cane-unions as its members – In turn cane-unions were separate primary co-operative societies having individual cane growers as their members-Assessee provided credit facilities to individual cane growers for purchase of pumping sets-Assessee received service charges of 5 per cent of price of pumps from suppliers of pumps In this case Apex court has held that the meaning of expression 'members' for a federated co-operative society could not be extended to include members of a primary co-operative society which was itself a member of such federated co-operative society seeking exemption. It was further held that since exemption was extended to co-operative societies which were directly extending credit facilities to its members only, federated co-operative societies could not be allowed same exemptions *under Section 80P(2)(a)(i). (1999) 103* Taxmann 376 (SC) *U.P. Co-op. Cane Union Federation Ltd. vs. Commissioner of Income-tax.*

4.9.2 In the cases of Co-operative sugar mills purchasing sugar cane from its members, who grow and supply sugar cane, an issue which has faced much litigation especially in the states of Gujarat and Maharashtra, is whether payment of extra price for procuring sugar cane by the co-operative to its members over and above the Minimum Support Price (MSP) fixed by the Government, is an allowable deduction in computing its profits. The additional price paid for procuring sugar cane is actually based on co-operatives own operational profits which vary from year to year. The question that arises is whether such extra payment amounts to application of income by way of distribution of profit to the members or is the purchase price or expenditure. A few appellate authorities in Maharashtra have taken the view that this does not amount to an expenditure allowable under Section 37(1) of the Act. This issue is now settled with an amendment in the Act, w.e.f. 01/04/2016, wherein a new Clause (xvii) has been inserted in Section 36 of the Act, given as under:

"(xvii) the amount of expenditure incurred by a co-operative society engaged in the business of manufacture of sugar for purchase of sugarcane at a price which is equal to or less than the price fixed or approved by the Government."

Thus, now sugar cane co-operative societies are not allowed deduction on account of price paid in excess of MSP fixed by the Government.

4.9.3 Similarly, it was observed that some sugar cane co-operatives use to deduct certain amounts from purchase price of the sugar cane payable to its members. In the accounts, such deductions were shown as 'deposit' with the stipulation that such deposits are to be adjusted against loss or repayment of loan or redemption of shares etc. The Supreme Court in the case of *CIT vs. Bazpur Co-operative Sugar Factory Ltd.* 172 ITR 321 has held that amounts deducted by the Society from the price payable to its members on account of sugarcane were deducted in the course of its trading activity primarily for discharging the liabilities of the Society and were held to be revenue receipts. It was further observed in the judgment that the essence of a deposit is that there must be a liability to return it to the party by whom or on whose behalf it is made on the Fulfilment of certain conditions otherwise it is a trading receipt irrespective of the nomenclature given to such deductions in the accounts of the Society. The retrospective amendment of bye laws of the society in that case was held to be invalid or of no effect.

4.10 Societies engaged in cottage industry- Under Section 80P (2)(a)(ii) deduction is allowable in the cases of the Co-operative Societies engaged in cottage industry. The main issue for determination in these cases is whether a particular society is engaged in cottage industry. Board's Circular No. 722 dated 19.9.95 has clarified various criteria which should be satisfied before a society can be said to be engaged cottage industry. The criteria according to the circular are:

4.10.1 A cottage industry is one which is carried on a small scale with a small amount of capital and a small number of workers and has a turnover which is correspondingly limited.

a. It should not be required to be registered under the Factories Act.

b. It should be owned and managed by a Co-operative Society.

c. The activities should be carried on by the members of the society and their families. For this purpose, a family would include self, spouse, parents, children, spouses of children and any other relative who customarily lives with such a member. Outsiders (persons other than members and their families) should not work for the society. In other words, the Co-operative society should not engage outside hired labour: District *Co-op Development Federation Ltd. vs. CIT* (1973)88 ITR 330 (Allahabad).

d. A member of a Co-operative society means a shareholder of the society.

e. The place of work could be an artisan shareholder's residence or it could be a common place provided by the Co-operative society: *CIT vs. Chichli Brass Metal Workers Co-op. Society Ltd.* (1978) 114 ITR 720 (MP).

f. The cottage industry must carry on activity of manufacture, production or processing; it should not be engaged merely in trade, i.e., purchase and sale of the same commodity: *CIT vs. Indian Co-operative Union Ltd.* (1982) 134 ITR 108 (Delhi).

The aforesaid criteria are also in conformity with the judicial pronouncements available so far with regard to the nature of cottage industry eligible for deduction under this Section. The Assessing Officer should, therefore, ensure that each of the criteria mentioned above is satisfied

before allowing deduction under Section 80P (2) (a) (ii).

4.10.2 Some issues relating to Cottage Industry as upheld by various judicial authorities, are given as below:

i. Coir marketing – An apex society for coir marketing cannot be said to be engaged in regard to any affairs cottage industry so as to be entitled to deduction under Section 80P(2)(a)(ii)—*CIT vs. Quilon Central Coir Marketing Co-operative Society Ltd.* (1998) ITR 348 (Ker.).

ii. Manufacture through primary societies – The assessee-society had the power to direct, supervise and control over the manufacturing of cloth through the primary societies which were the members of the assessee-society. Members of the primary societies ran cottage industries in their houses. In these circumstances, it could not be said that the assessee-society was not engaged in the manufacturing activities carried out by the weavers. The weavers got the way materials, i.e. yarn through their primary societies, but thereafter weaving charges were paid by the assessee and it purchased the cloths through primary societies *CIT vs. Rajasthan Rajya Bunker Sahakari Sangh Ltd.* (2002) 124 Taxmann 135 (Raj.).

iii. Profit attributable to cottage industry are deductible in entirety – Expression whole of the amount profits and gains of business attributable to any one or more of such activities' industries that deduction under Section 80P(2)(a) is to be given to the extent of whole of profit attributable to cottage industry without deducting there from any loss arising in any other activity– *CIT vs. Agency Marketing Co-operatives Society Ltd.*(1993) 201 ITR 881 (Ori.).

4.11.1 Societies engaged in marketing of agricultural produce of their members – Prior to its amendment brought about by Income-tax Second Amendment Act, 1998, from 01/04/1968, the expression used in Section 80P (2) (a) (iii) was 'marketing agriculture produce of its members'. In a number of cases decided by the courts it was held that for the purpose of allowance of deduction under the said Section the produce need not be grown by the members of the society. In order to bring in the real intent behind the provisions an amendment, as aforesaid, was brought about whereby the expression was substituted by 'agriculture produce grown by its members'. This amendment has neutralised the effect of judgment of the Supreme Court in the case of *Kerala State Co-operative Marketing Federation Ltd. vs. CIT* 231 ITR 814. According to the amended provisions this Section applies to the societies engaged in marketing the agricultural produce only and not to the income derived from anything manufactured or processed out of it. For instance, if a Co-operative society is engaged in milling the paddy or if it undertakes the sales of rice processed out of such paddy it will not be entitled to deduction under Section 80P (2) (a) (iii). Here it requires to be taken note of that the ratio of judgments delivered with reference to the law as it existed prior to the amendment would not support the cases of the societies.

4.11.2 Some Case Laws in Favour of the Department

i. Assessee a federation of co-operative societies derived income from marketing of agricultural produce received from member societies. Deduction not eligible under Section 80P(2)(a)(iii) as well as 80P(2)(e) *CIT vs. Haryana State Co-op. Supply & Marketing Federation Ltd. (P&H)* 201 Taxmann 169.

ii. As per Section 80P(2)(a)(iii), income from marketing of agricultural produce grown by its members is only eligible for deduction – Since item marketed by the assessee being lint which was obtained in the process of manufacture and not grown by its members, assessee not entitled for deduction. *CIT vs. Virudhunagar Co-operative Marketing Society Limited (Mad)* 255 ITR 558.

iii. Income of Co-operative society from selling rice – No deduction under Section 80P(2)(a)(iii) since what is sold i.e. rice is not an agricultural produce and deduction is allowable only if the end product which reaches the consumer is an agricultural produce–Rice does not retain the same character as paddy after hulling and hulling is not a necessary process for marketability of the produce. South Arcot District *Co-op. Supply & Marketing Society Ltd. vs. CIT (Mad)* 97 ITR 500.

4.12 Societies engaged in purchase of agricultural implements, seeds, livestock etc. Section 80P (2) (a) (iv) provides for deduction in the cases of the societies engaged in the purchase of agricultural implements, seeds, livestock or other articles intended for agriculture for the purpose of supplying them to its members. The deduction under this Clause is admissible with reference to the net profit and not to the gross profit as held by the Supreme Court in the case of *Sabarkantha Zilla Chara Vechan Sangh Ltd. vs. CIT* 203 ITR 1027,1037.

4.12.1 Some Salient Points

i. Assessee must prove factum of purchase – It is necessary that the assessee must prove that it has purchased the certain articles, which means that it has acquired property in certain articles, and those articles have been sold to the members—*Vidarbha Co-op. Marketing Society Ltd. vs. CIT* (1985) 156 ITR 422 (Bom.).

ii. Supply need not necessarily be to members – Section 80P(2)(a)(iv) does not require that the supplies shall be made by the co-operative society only to members and to no one else—*CIT vs. Guntur Distt. Co-op Marketing Society Ltd.* (1985) 154 ITR 799 (AP). However, deduction is not available under Section 80P(2)(a)(iv) in respect of profit on sale of commodities to non-members—*CIT vs. Vidarbha Co-operative Marketing Society Ltd.* (1995) 212 ITR 327 (Bom.).

iii. Apex society can also be a member – The expression 'members' in Section 80P(2)(a)(iv) cannot be restricted to either a member of a primary society or to an agriculturist alone—*CIT vs Tamil Nadu Co-operative Federation Ltd.* (1983)144 ITR 317(All.).

iv. Cattle-feed – It cannot be said that cattle-feed meant for livestock has no connection with agricultural operations and as such is outside the exemption contemplated under Section 80P(2)(a)(iv)—*CIT vs. Thudialur Co-operative Agricultural Services Ltd.* (1997) 143 CTR (Mad.) 362.

v. Sale of fertilizers to members – Where the assessee was a co-operative marketing federation registered under the Co-operative Societies Act, and it mainly dealt, inter-alia, in general fertilizers, products from mixing units, etc., it would be entitled to deduction in respect of profit from sale of fertilizers to its members—*CIT vs. Tamil Nadu Co-operative Marketing Federation Ltd* (1999) 151 CTR (Mad.) 232.

vi. Mixing pesticides – By purchasing different kinds of manures and pesticides and mixing them up for the purpose of selling

the same to the small farmers in retail, it cannot be said that the assessee is indulging in any manufacturing activity or processing of goods, so as to disentitle it to exemption under Section 80P(2)(a)(iv)—*CIT vs. Thudialur Co-operative Agricultural Services Ltd.* (1997) 143 CTR (Mad.) 362.

4.13 Societies engaged in processing of agricultural produce (Section 80P(2)(a)(v)) – This Section provides for deduction in the cases of the societies engaged in the processing, without the aid of power, of the agricultural produce of its members. There is no amendment in this Clause on the lines of amendment to Clause (iii) and, therefore, the judgment of the Supreme Court (231 ITR 814) may be applicable to societies engaged in the processing the agriculture produce of its members even if the produce is not grown by them.

4.14 Collective disposal of labour (Section 80P(2)(a)(vi)) – Income from the activity of collective disposal of the labour of its members is deductible under Section 80P(2)(a)(vi).

This deduction is available only when the earning of the society is through the utilization of the actual labour of its members. Thus, a society of engineers engaged in collective disposal of labour of members where actual supervision of work in field is done by paid employees will not be entitled to exemption, since there is no direct connection between the work executed and the specialty of members of the society as engineers – *Nilagir Eng Co-op Society Ltd, vs. CIT* (1994) 208 ITR 326(Ori.). Likewise, where not only members but also a large number of non-members were contributing collective disposal of labour and condition laid down in proviso to Section 80P(2)(a)(vi) was not fulfilled, the assessee society would not be entitled to exemption of its income-*Assessing Officers vs. Ganesh Co-op. (L&C) Society Ltd.* (1998) 67 ITD 436 (Asr.).

4.14.1 Persons not falling in specified categories can be members but they should have no right to vote–If the co-operative society as specified in sub-Clause (vi) wants to claim full deduction of the profits made by it, persons other than those falling under the three specified categories can be members of the society, but they should not be given the right to vote and that fact should be clearly borne out from the rules and bye-laws restricting the right to vote only to members specified in the proviso—Gora *Vibhag Jungle Kamdar Mandali, 161 ITR 658 (Guj)*. Societies engaged in disposal of labour.

4.15 Fishing and allied activities (Section 80P(2) (a)(vii)) – The whole of the profits of co-operative society engaged in fishing and allied activities are deductible under Section 80P(2) (a)(vii). Fishing and allied activities include the catching curing, processing, preserving, storing or marketing of fish or the purchase of materials and equipment in connection therewith for the purpose supplying them to its members.

4.16 Interest/ dividend (Section 80P(2)(d)) – The whole of interest and dividend income derived by a co-operative society from it investments in any other co-operative society is deductible under Section 80P(2)(d).

i. Net income from interest received from co-operative societies/ co-operative banks computed after deducting expenses debited to income and expenditure account relatable to earning of such income is deductible *under Section 80P(2)(d)—CIT vs. U.P. Co-operatives Sugar Factories* (2013) 2019 Taxmann 33(All).

ii. Interest derived by the assessee co-operative sugar mill from its investment in co-operative bank would qualify for

deduction in its entirety under Section 80P(2)(d), without adjustment of interest paid by the assessee to the *co-operative bank-CIT vs. Doaba Co-operative Sugar Mills Ltd.* (1998)96 Taxmann 509/230 ITR 774 (Punj. & Har.).

4.17 Societies deriving income from letting out of godowns (Section 80P(2)(*e*)) provides for deduction in respect of 'any income derived by the society from letting of godown or warehouses for storage, processing or facilitating the marketing of commodities'. The issue relating to the interpretation of the expression 'any income derived by' came for consideration of the Supreme Court in the case of *Orissa State Warehousing Corporation vs. CIT* 237 ITR 589, when it was dealing with the interpretation of Section 10(29) of the Income-tax Act. It was held that when the expression 'any income' is qualified by the word 'derived' it gives it a very restrictive meaning. The exemption in that case was held to be available only to that part of the income which arises or is derived from letting of godown or warehouse for the specified purpose, namely, storage, processing or facilitating the marketing of commodities and not for any other purpose. The deduction may, therefore, not be available in respect of income of a society from integrated activities which are not directly linked with the activities referred in the provisions. In this connection a reference may also be made to the case of *CIT vs. Ahmedabad Maskati Cloth Dealers Co-operative Warehousing Society Ltd.* 162 ITR 142 (Guj).

4.18 Needless to say that the ratio of the judgments discussed above is applicable to the facts of a given case and unless full facts relating to the activities or to the nature of the concerned transactions are brought on record, the judgments by themselves may not be of any help. The Assessing Officer should normally analyse the contents of the bye-laws of the society, make actual verification of the activities of the society and thereafter determine the issues that arise there-from.

4.18.1 It sometimes happens that the treatment given to some of the items of reserves, provisions, investments etc. in the accounts filed with the return of income is different from that given in the accounts meant for the public consumption and filed with the Registrar of Societies. It is obvious that the determination of real nature of these items of account is crucial to the issues involved in computing the deduction under Section 80P(2). While looking into the return of income and the accompanying accounts it is, therefore, advisable for the Assessing Officer to call for and examine the audited accounts and Balance Sheet submitted to the Registrar of Societies and meant for the public consumption.

4.18.2 How important a physical verification of the activities of a society may prove in a case will be evident from the discussion in the para that follows.

4.19 Co-operative Society *vs.* Bank: In the case of *Assistant Commissioner of Income-tax, Circle-I vs. Quepem Urban Co-operative Credit Society Ltd.* (2015) 63 taxmann.com 300 (SC). The Hon'ble Supreme Court of India has granted SLP and for Assessment years 2008–09, 2009–10 and 2011–12 reversed the order of High Court where it was held that assessee-co-operative society could not be regarded as 'Co-operative Bank' on, mere fact that an insignificant proportion of revenue was coming from non-members, and thus, was entitled for deduction under Section 80P(2)(a)(i)-Whether Special Leave Petition filed against impugned order was to be granted-Held, yes (In favour of revenue).

4.20 *Punjab State Co-operative Federation of House Building Societies Ltd. vs. Commissioner of Income-tax* (2016) 76 taxmann.com 98

(Punjab & Haryana) – Assessee was a co-operative society-In banks other than co-operative bank, it made short term investment of surplus which was not immediately required for business purpose-Assessee also advanced loans to employees for housing and conveyance-Tribunal found that deduction under Section 80P(2)(a)(i) was available only in respect of core activities of societies; that interest received by assessee was not from core activities and, therefore, same had to be taxed as 'Income from other sources' and, thus, assessee would not be entitled to deduction under Section 80P. Whether there was no error or perversity in approach of Tribunal-Held, yes (Para 10)(In favour of revenue).

4.21 In the case of *Citizen Co-operative Society Ltd. vs. Assistant Commissioner of Income-tax, Circle-9(1),* Hyderabad: Where assessee society was engaged in activity of finance business and was also engaged in activity of granting loans to general public as well, it could not be termed as co-operative society meant only for its members and providing credit facilities to its members, hence not entitled to deduction under Section 80P-Section 80P of the Income-tax Act,-1961 Deductions-Income of Co-operative Societies (Co-operative Bank)-Assessment Year 2009–10. Assessee, a co-operative society claimed deduction under Section 80P(2)(a). Same was denied on ground that assessee was carrying on banking business for public at large. It was found that activities of assessee were in violation of Mutually Aided Co-operative Societies Act, 1995 under which it was formed. Assessee was catering to two distinct categories, *viz.* (1) ordinary members and (2) nominal members who made deposits with assessee for obtaining loans, who were not members in real sense. Further, most of assessee›s business was with this second category of persons and depositors and borrowers were quite distinct. Thus, in reality, such activity of assessee was that of finance business and could not be termed as co-operative society-Moreover, it was also found that assessee was engaged in granting loans to general public without any approval from Registrar of Societies – Whether thus assessee could not be treated as a co-operative society meant only for its members and providing credit facilities to its members and accordingly it would not be entitled to claim benefit of Section 80P. Held, yes (Paras 25 and 27) (In favour of revenue).

Circulars and Notifications: CBDT Circular No. 133 of 2007, dated 09/05/2007.

5. BOGUS OR PAPER SOCIETIES

5.1 On physical verification of the activities of societies in few cases it was found that there were no genuine Co-operative societies in existence. The societies were merely paper entities created for the purpose of taking advantage of the sales tax, excise duty, concessional loans offered by the Government and other benefits available to the co-operative societies. The advantage relating to availing of deduction under Section 80P and availing of cheap credit from banks etc. was only incidental. In the cases popularly known as 'Shoe scam cases' it was found that a group of assessees (Dawood Shoes, Metro Shoes and Milano Shoes) created a large number of fictitious Co-operative societies named as 'cobbler's societies' ostensibly engaged in the manufacture of parts of shoes. On behalf of these non existing Co-operative societies they availed loans of crores of rupees from different banks. The accused created a fictitious Co-operative society of cobblers to take advantage of government loans through various schemes.

5.1.1 In fact no such societies existed in as much as no actual activities were carried on by these societies. They did not even have any premises, raw materials or implements. The promoters of these bogus societies were trusted

men of the group and most of the members were found to be bogus. The societies obtained credit for purchase of raw material etc. from the banks on the guarantee of the members of the beneficiary group. This fact further established the connection of the bogus societies with the group.

5.1.2 In-fact the banks involved in giving loans were also charge sheeted by the investigating agencies. The Banks whose officials were involved in this scam are: Maharashtra State Finance Corporation, Citibank, Bank of Oman, Dena Bank, Development Credit Bank, Saraswat Co-operative Bank, and Bank of Bahrain and Kuwait.

5.1.3 The group showed purchases of shoe parts, such as shoe uppers, from the cobbler societies though in fact no such purchases were made from the societies. The shoe parts were directly manufactured by the group from the raw material shown as purchased in the accounts of the societies. By creating these paper entities not only the group benefited by evading payment of excise duty, sales tax etc. which it would have otherwise paid, the societies also used to inflate the purchase price of the semi finished produce shown to have been purchased from these societies. The extent of inflation in purchase price was found to be as high as 40% of the purchase price debited to the accounts. This scam was exposed in 1995.

5.2 Further enquiries from the so-called promoters of the societies revealed that they merely received commission @ 3% of the amount of bogus sales shown to the business entities of the beneficiary group. The societies were accordingly assessed on such commission income and no deduction under Section 80P was obviously allowed in their cases. In the cases of the business entities of the group, disallowances were made in respect of inflation in purchases shown from the societies.

5.3 The modus operandi discussed above leads to the conclusion that if on verification in a given case the activities of a society are not found to be genuine, apart from denying deduction under Section 80P, it would be essential for the AO to investigate the matters further and establish on facts as to who are the real beneficiaries of the transactions shown in the accounts of the bogus societies. The evidence gathered in this behalf along with the facts of the case and the findings recorded in the assessment order of the society require to be sent to the AOs having jurisdiction over the cases of the respective beneficiaries.

6. DEDUCTION OF TAX AT SOURCE

6.1 As per Section 194 A (3) (i) of the Income-tax Act, 1961, interest exceeding Rs. 10,000/-on time deposits with a Co-operative society engaged in carrying on banking business is subject to deduction of tax at source. As per Section 194A (3)(v) of the Act, interest income credited or paid by a Co-operative society to its members or to any other Co-operative society, is not subject to deduction of tax at source though it is not exempt from charge of Income-tax. The definition of the member is given in Section 2(13) of the Gujarat Co-operative Societies Act, 1961 which reads as under:

> "Member means a person joining in an application for the registration of a co-operative Society which is subsequently registered, or a person, duly admitted to membership of a society after registration, and includes a nominal, associate or sympathiser member".

6.2 Instances have come to light which show that many Co-operative banks take undue advantage of this Clause by making many of their large depositors, nominal members of the Co-operative banks by charging a small fee of

say Rs. 5/-and thereby do not deduct tax at source on interest payments to such depositors. However, no case law is available on this issue so far. This issue is also under consideration of the Board.

6.3 A Co-operative society like any other assessee may make an application to the assessing officer under Section 197 of the Act, for deduction of tax at lower rate, in case the income likely to be received so warrants. The relevant rules are 28, 28AA and 29. Similarly, a Co-operative society may furnish declaration in duplicate under Section 197A (IA) of the Act, to the person responsible for paying any income of the nature referred to Section 193 (interest on security), Section 194 A (interest other than interest on securities) for no deduction of tax at source. The relevant form is 15H, which has to be verified in the prescribed manner to the effect that the tax on the estimated total income of the previous year will be "nil".

6.4 In the case of *Girijan Co-op. Corporation Ltd. vs. Assistant Commissioner of Income-tax, Range-2(TDS)*, *Visakhapatnam* (2011) 13 taxmann.com 42 (Visakhapatnam)—Assessing Officer noticed that product sold by assessee fell under category of forest produce and assessee was required to collect tax at source-He raised demand under Section 206C – Assessee contended that sales were made to buyers who had already been assessed to tax and who had filed their Income-tax returns disclosing impugned transaction and, therefore, assessee was not liable under Section 206C since buyers had already paid tax thereon – Whether as per Section 206C(6), person being seller of specific goods, is not deemed to be an assessee-in-default; however, is made liable to pay TCS amount – Held, yes – Whether, therefore, assessee was liable to pay demand raised under Section 206C(6) – Held, yes (In favour of revenue).

CHAPTER

4

Dairy Industry

1. GENERAL

1.1 Apart from its popularity and acceptability in India, milk is recognised as a nutritive food par excellence. Proteins constitute 3.4% and 3.9% of cow and buffalo milk, respectively.

1.2 With the increased availability of liquid milk and Western dairy products, refinement in the marketing network and improvement in per capita income, there is an increased pressure for the restructuring of the indigenous milk products industry. Now the organised sector has an increased presence in processes and equipment for manufacturing traditional products, standardization of products, as well as refinement in packaging and improvement in safety and shelf life.

1.3 Milk production during 2015–16 and 2016–17 was 155.5 million tones and 165.4 million tonnes respectively in India, showing an annual growth of 6.37 per cent. The per capita availability of milk was around 355 grams per day in 2016–17.

2. CHEMISTRY OF MILK

2.1 The major constituents of milk are water, fat, protein, lactose, ash or mineral matter. The minor constituents are phospholipids, sterols, vitamins, enzymes, pigments etc. With the development of dairy technology, each & every constituent of milk can be extracted so as to produce different kind of milk products. Chemical composition of milk of different species is as under:

Table 1: Chemical Composition of Milk

Species	Percentage of				
	Water	Fat	Protein	Lactose	Ash
Buffalo	82–84	7.0–11.5	3.3–3.6	4.5–5.0	0.8–0.9
Camel	86–88	2.9–5.4	3.0–3.9	3.3	0.6–0.9
Cow (foreign)	85–87	3.7–4.4	3.2–3.8	4.8–4.9	0.7–0.8
Goat	87–88	4.0–4.5	2.9–3.7	3.6–4.2	0.8–0.9
Human	88–89	3.3–4.7	1.1–1.3	6.8–7.0	0.2–0.3

Source: (Kanhal and Hamad, 2010)

2.2 Factors Affecting Composition of Milk: The factors affecting composition of milk are-species, breed, individuality, interval of milking, completeness of milking, frequency of milking, irregularity of milking, day-to-day milking, disease and abnormal conditions, feeding, season and age.

Table 2: Approximate Composition of Cow Milk (Western)

Component	Average Content (% w/w)	Range (% w/w)	Average (% On Dry Matter Basis)
Water	87.3	85.5–88.7	
Solids not fat	8.8	7.9–10.0	69
Fat in dry matter	31.0	21.0–38.0	
Lactose	4.6	3.8–5.3	36
Fat	3.9	2.4–5.5	31
Protein	3.25	2.3–4.4	26
Casein	2.6	1.7–3.5	20
Mineral substances	0.65	0.53–0.80	5.1
Organic acids	0.18	-	1.4
Miscellaneous	0.14	-	1.1

Source: Dairy Chemistry and Physics, Walstra and Nenness, 1984

Table 3: Average Composition (% w/v) of Milk from Different Breeds of Buffalo

Breed	% Fat	% SNF
Murrah	6.8	10.1
Jaffarabadi	7.3	10.1
Surti	8.4	10.3

Source: Rangappa and Achaya, Indian Dairy Products, 1974

3. DAIRY FARM VIS-A-VIS DAIRY INDUSTRY

Dairy Farm is a farm devoted chiefly to the production of milk and the manufacture of butter and cheese, whereas in dairy Industry, milk is procured from village, farm etc. and after due process, market milk and also variety of milk products are made. The rural areas are normally identified for milk production, the urban centres are selected for the location of milk processing plants and product manufacturing factories. These plants and factories rapidly expanded and modernised with improved machinery and equipment to secure various advantages of large-scale production.

4. DAIRY BUSINESS

4.1 Purchase of Milk: The organized dairies collect milk through one or combination of the following systems.

4.1.1 Direct System: In this system, organized processor (Public, Co-operative or Private) collects milk directly from the producers by establishing village procurement centres.

4.1.2 Contractor System: The processors purchases milk from the contractor according to the terms of contract such as quality, quantity, price, etc.

4.1.3 Agent System: The processor appoints agents to procure milk in particular area. Payment for the milk is made directly to the producers while the agent gets the commission.

4.1.4 Co-operative System: At the village level, the farmers form a co-operative society, which establishes the milk collection centres. The society collects milk twice a day and delivers it to the milk collection centres where the milk is weighed, tested and the price paid to farmers.

The payment is based on fat content or fat + SNF content in the milk. The village society supplies/ sells milk to its own District co-operative dairy plant. It transports milk in cans by trucks or through insulated road milk tankers, preferably via a chilling centre. Besides milk collection, the society also provides the technical input services such as the A.I, veterinary aid; concentrated cattle feed and fodder seeds. The society also provides counselling to the society members to enhance milk production.

4.1.5 Chilling Centres/ Bulk Milk Cooling Centres: If the dairy plant is far away from the collection centre, then the collected milk is first brought to a centralized chilling centre/ bulk milk cooling unit. Here, milk is cooled to 4°C and stored in insulated storage tanks of 5000–20,000 litres capacity. Subsequently, the chilled milk is transported in insulated road milk tanker to the dairy plant. The transportation of milk from the chilling centre to the dairy plant usually takes place once a day.

4.2 Purchase Pricing: Fat and SNF are two major constituents of milk which are considered for price fixation. The '2-axis pricing policy' gives importance to both fat and SNF; the per kg (rate) price of fat and SNF are fixed in that ratio at which these occur naturally i.e. around 2/3 of fat per kg price for each kilogram of SNF. This type of pricing discourages adulteration. Basic price is fixed for basic composition and for each 0.1 additional value, bonus is added and for shortfall deductions are made.

4.2.1 Buying: Different methods are employed for buying milk, singly or in combination, as given below:

i. Payment according to weight or volume (also known as a flat rate) is prevalent in the unorganised sector.

ii. Payment according to the fat content of milk.

iii. Payment of premiums based on quality of milk is usually confined to market milk. Premium is decided as it encourages production of high grade milk.

iv. Payment according to the cost of production is usually followed by dairies in the organised sector.

At present each milk plant or dairy product factory has evolved an arbitrary system of milk pricing, which seems to have no relation to the actual cost of milk production. Liquid milk plants have a differential pricing system for flush and lean months based on the fat and SNF contents of milk with provision for the payment of a premium for a higher fat and SNF contents than any specified standard. Dairy product factories purchase milk merely on a per kilo fat basis at different prices for different season. The fat portion being visible (giving thickness), separable (yielding cream) and measurable (in percentage) made it easier to decide milk price.

4.2.2 Kilo Fat System: A system based on 'kilo fat' became a practice for purchase of buffalo milk. Under this system, an amount in rupees per kg of fat means an amount payable on that quantum of milk which would yield one kg of fat. For example, when the rate per kg fat is Rs. 425, it means that the said amount will be paid for 16.66 L of buffalo milk with 6% fat (minimum standard): 1 kilo (1000gm) fat ÷ 60 gm/L (6%) = 16.66 L On this basis, the price per L works out to: Rs 425 ÷ 16.66 = Rs 25.51/ L If cow milk with 3.5% fat (min standard) were to be purchased under kg fat system, it would fetch Rs 14.87 per L as shown below: 1000 gm ÷ 35 gm/L (3.5%) = 28.57 L Rs 425 ÷ 28.57 = Rs. 14.87/L.

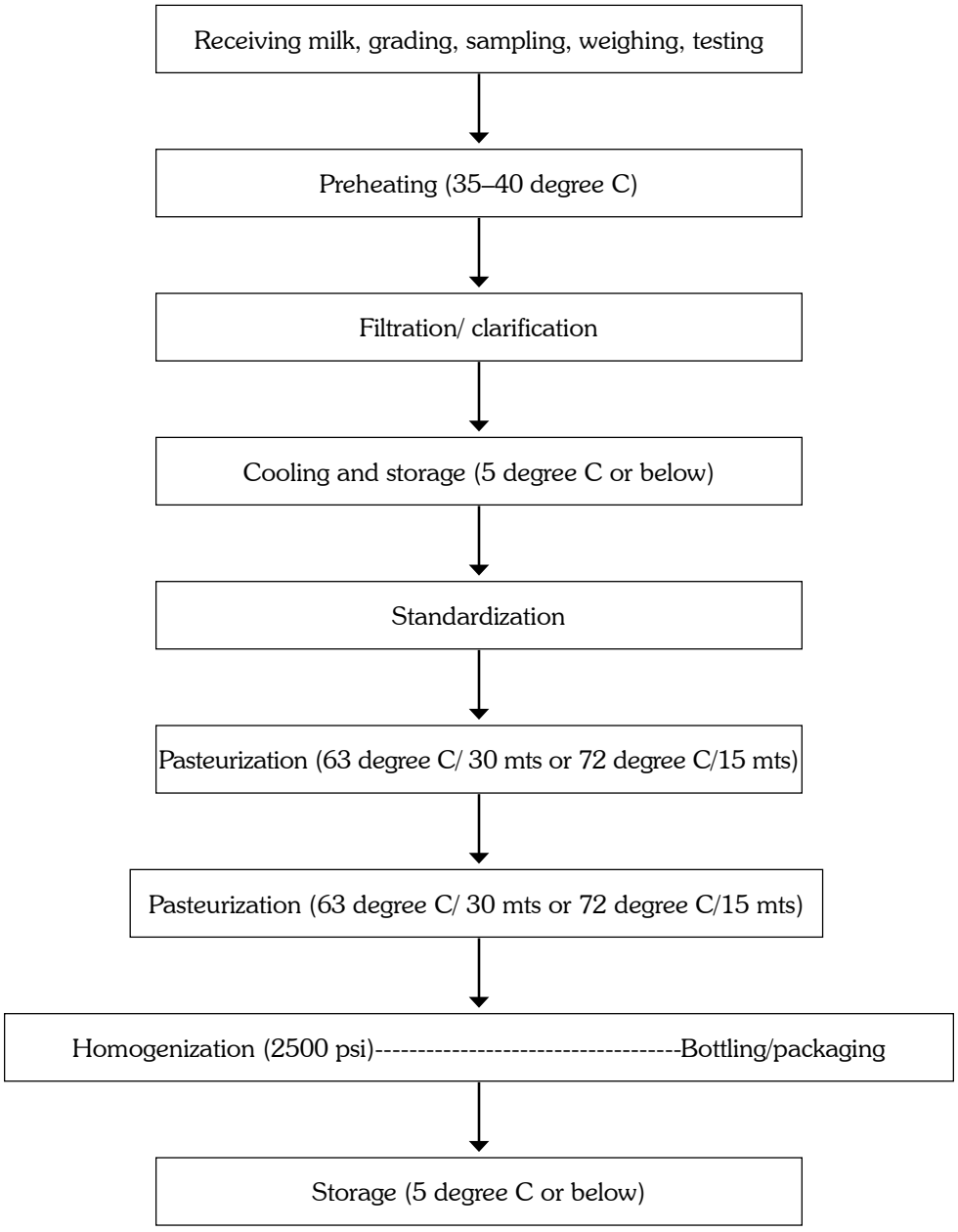
4.2.3 Double Axis Pricing: With a view to pay for buffalo milk and cow milk on the rationale of their two components, *viz.* fat and SNF, a system was devised called as Double–axis milk pricing. The purchase rate for fat and SNF are determined based on previous experience or ruling market prices.

Table 4: Example

Type of Milk	Fat	SNF	Rs./L
Buffalo milk (%)	6.0	9.0	25.62
Rate (Rs./kg)	190	158	
Amount (Rs./L)*	11.40 (= 60x 19.0)	14.22 (= 90x 15.8)	
Cow Milk (%)	3.5	8.5	20.08
Rate (Rs./kg)	190	158	
Amount (Rs./L)*	6.65 (= 35x19.0)	13.43 (= 85x 15.8)	

4.3 Manufacture, Packing & Storage of Pasteurized Milk

Flow Diagram


Receiving milk, grading, sampling, weighing, testing
Preheating (35–40 degree C)
Filtration/ clarification
Cooling and storage (5 degree C or below)
Standardization
Pasteurization (63 degree C/ 30 mts or 72 degree C/15 mts)
Pasteurization (63 degree C/ 30 mts or 72 degree C/15 mts)
Homogenization (2500 psi)----------Bottling/packaging
Storage (5 degree C or below)

4.3.1 Receiving Milk

i. **Grading:** Milk may be delivered to the milk plant/ dairy in cans or tankers (road or rail). The milk in these containers has to be graded, emptied, measured by weight or volume, sampled, and bulked to provide continuity of supply to the pasteurizing equipment. In the absence of mechanical aids, the cans are offloaded manually to the tipping point, where the lids/ covers are removed and the milk inspected. Where a higher output is required, the procedure is mechanized and the cans are unloaded directly from the truck onto the conveyor (power driven or by gravity-roller) and the tipping, sampling and weight-recording may be completely automatic. If milk is measured by weight, as is usual, it is tipped into the weight tank/ pan; this is suspended from a weighing machine, the indicating dial of which is calibrated in weight and so placed that it can be easily seen by the checker. If milk is being received from *Milk-Chilling Centres* it has already been graded, weighed, sampled and cooled. It may be weighed and sampled again, or the Centre's report may be used

ii. **Sampling:** Sampling is done for subsequent chemical and bacteriological analysis.

iii. **Weighing:** This is an essential step in accounting for milk receipts and disposal, making payments for milk, etc. The milk in-cans is dumped into the weight tank, either manually or mechanically. The tank is mounted on scales and the scale dial set at zero when the empty tank is on the scale, thus enabling the operator to make a direct reading of the weight of the milk (Weighing is facilitated by the use of a dial reading or some other indicating scale, rather than a beam scale). The milk in tankers (road or rail) may be measured by volume by passing it through a flow-meter; and its measurement converted into weight by multiplying the volume with an agreed density. In case of road milk tankers, another common alternative is to use a weigh-bridge, the tanker being weighed once when it is full, and again after it has been emptied. However, any mud or snow on the tanker should be washed off before weighing, adjustments to fuel or water should not be made between weightings, and the driver and his accompaniment should be either on or off the vehicle on both occasions.

iv. **Testing:** Apart from initially accepted/ rejected lots of milk, there are always some of doubtful quality. All the accepted lots have already been properly sampled; these, together with samples of the remaining two categories, have to be tested in the quality control laboratory for the final verdict of acceptance/ rejection.

4.3.2 Preheating: This term refers to heating before the operation which follows immediately. The milk is preheated for efficient filtration/ clarification. Preheating becomes essential if the incoming milk is cold, as otherwise the flow of milk is hampered. As the temperature of the milk increases, the viscosity decreases and more efficient filtration/ clarification results.

4.3.3 Filtration/ Clarification: This is done to improve the aesthetic quality of milk by removing visible foreign matter which is unseemly and may therefore cause consumers complaints.

4.3.4 Cooling and Storage of Raw Milk-1

i. **Cooling:** As soon as the milk is received in the Plant, it is chilled to 5 degree C or below and stored cool till used, to prevent deterioration in its bacteriological quality during the interim period: Various methods are employed for cooling known as surface cooler, plate cooler, internal tubular cooler, jacketed vat/ tank

ii. **Storage:** Modern milk plants hold both raw and pasteurized milks for a much

longer period than before. Normally the milk storage capacity is equal to one day's intake. This allows a more nearly uniform work-day for processing and bottling operations with less dependence on the time for receiving raw milk. Storage tanks are used in milk plants for the storage of raw, pasteurized, or processed products, often in very large volumes. Due to the longer periods of holding, storage tanks are among the most important items of equipment.

4.4 Standardization: Standardization of milk refers to the adjustment, i.e. raising or lowering of the fat and/ or solids-not-fat percentages of milk to a desired value, so as to conform to the legal or other requirements prescribed. Milk is standardized by the addition of milk or cream with a higher or lower fat percentage than that of the material to be standardized. Sometimes the addition of skim milk will do. To solve the problem, it is necessary to find the relative amounts of original material and standardizing material to be mixed together to give a product with desired fat content.

4.5 Pasteurization: The term Pasteurization, as applied to market milk today, refers to the process of heating every particle of milk to at least 63 degree C (145 degree F) for 30 minutes, or 72 degree C (161 degree F) for atleast15 seconds (and not more than 25 seconds). After Pasteurization, the milk is immediately cooled to 5 degree C (41 degree F) or below to render milk safe for human consumption by destruction of 100% pathogenic microorganisms; to improve the keeping quality of milk by destruction of almost all spoilage organisms (85–99%).

4.6 Homogenization: A considerable proportion of market milk pasteurized in developed dairying countries is now homogenized as well. In this process, milk fat globules are reduced in size & dispersed uniformly through the rest of the milk.

4.7 Bottling/ Packaging: The pasteurized and cooled milk is promptly bottled/ packaged so as to serve the dual purpose of:

i. Protecting the milk against contamination, loss, damage or degradation (due to micro-organisms or insects; exposure to heat, light, moisture or oxygen; spillage, evaporation or pilferage).

ii. Helping in sale and distribution of milk (by packaging it in an easy-to-carry-and-open, sufficiently strong and leak-proof, non-tainting container).

Earlier milk was used to be distributed in bottles. Now the concept has changed and milk is distributed in polythene packs.

4.8 Storage: In any milk plant, it is necessary to provide refrigerated rooms where milk can be stored until delivery. The temperature of milk storage rooms should be 5 degree C or below so as to check bacterial growth.

4.9 Distribution: Distribution of milk is the last or final stage of the market milk industry. This varies with the size and the type of business. In a small plant, the same drivers and trucks may deliver both wholesale and retail goods. In larger organisations, wholesale & retail distribution are usually handled by separate personnel and equipment. Due to the highly changeable temperatures during most seasons and the lack of refrigeration facilities at the average customer's home in India milk has to be distributed twice daily, *viz.* morning and evening. In cold countries, one time delivery is usual.

4.10 Systems of Collection for Payment of Milk-Credit, cash or advance payment (coupon monthly card) are in vogue.

5. OTHER TYPES OF MILK & MILK PRODUCTS

5.1 Toned Milk: Toned milk (also called Single Toned Milk) refers to milk obtained by the addition of water and skim milk powder to

whole milk. Under the PFA Rules (1976), toned milk should contain a minimum of 3% fat and 8.5% solids-not-fat throughout the country. By merely adding water to whole buffalo milk, both the fat and solids-not-fat content is reduced. But by adding skimmed milk powder to the mixture, solids-not-fat is 'toned up' or increased to the original level.

5.2 Double Toned Milk: This is the same as toned milk, except that under the PFA Rules (1976), double toned milk should contain a minimum of 1.5% fat, 9% solids-not-fat throughout India.

5.3 Cream: Cream is known as the fatty layer that rises to the top of the milk when it stands undisturbed for some time. Cream may be defined as (i) that portion of milk which is rich in milk fat, or (ii) that portion of milk into which has been gathered and which contains a large portion of milk fat, or (iii) when milk fat is concentrated into a fraction of the original milk, that portion is known as cream.

5.4 Curd/ Dahi: It is usually made from Pasteurized Toned Milk. The process takes about 8 to 12 hours through bacterial fermentation.

5.5 Yogurt: Yogurt, also spelled yoghurt, yogourt or yoghourt, is a food produced by bacterial fermentation of milk. The bacteria used to make yogurt are known as yogurt cultures. Yogurt comes in different fruit flavours too.

5.6 Butter: Butter serves as the balance wheel of the diary industry; surplus milk is converted into butter, while during times of scarcity the milk intended for butter-making is used for more essential products. Butter may be defined as a fat concentrate which is obtained by churning cream, gathering the fat into a compact mass and then working it. According to the PFA Rules (1976), table (creamery) butter should contain not less than 80% fat, not more than 1.5% curd and not more than 3% common salt.

5.7 Ice Cream: Ice cream may be defined as a frozen dairy product made by suitable blending and processing of cream and other milk products, together with sugar and flavour, with or without stabilizer or colour, and with the incorporation of air during the freezing process.

5.8 Cheese: Cheese like butter, also functions as the balance wheel of the dairy industry in developed dairying countries. The manufacture of cheese did not develop in India during the past mainly because animal rennet could not be used by Indians, who considered cow slaughter sinful. However, they discovered a plant known as Withaniacoagulans, the seeds of which coagulated milk, and this helped in the preparation of Indian cheese or paneer on a very limited scale.

5.9 Condensed Milk: Condensed milk is obtained by evaporating part of the water of whole milk, or fully or partly skimmed milk, with or without the addition of sugar. The term 'condensed milk is commonly used when referring to full-cream sweetened condensed milk', while the term 'evaporated milk' is commonly used when referring to 'full cream unsweetened condensed milk'.

5.10 Dried Milks: Dried milk or milk powder is the product obtained by the removal of water from milk by heat or other suitable means, to produce a solid containing 5% or less moisture. Whole milk, defatted milk or skim milk may be used for drying. The dried product obtained from whole milk is called Dried Whole Milk or *Whole Milk Powder (WMP);* and that from skim milk is known as Dried Skim Milk or *Skim Milk Powder (SMP),* or Non-fat Dry Milk *(NFDM)*. The various dried milk products are given specific names.

5.10.1 Standards

i. **Whole Milk Powder:** According to the PFA Rules, 1976, whole milk powder is the product obtained from cow or buffalo milk, or a combination thereof, or from standardized milk, by the removal of water.

ii. **Skim Milk Powder:** According to the PFA Rules (1976), skim milk powder is

the product obtained from (the skim milk of) cow or buffalo milk, or a combination thereof, by the removal of water.

5.10.2 Dried Milk Products: Dried milk products are manufactured for the same purposes as dried milks, *viz.* to reduce bulk so as to effect a saving in storage space, to reduce packaging and transportation costs, to improve the storage life of the product etc. Dried buttermilk or buttermilk powder may be prepared from sweet, sour and high-acid buttermilks.

5.11 Makkhan: The yield of makkhan is influenced by the fat content of the initial milk, the moisture content of makkhan and the fat loss in lassi (buttermilk). The fat content of milk depends primarily on its type; buffalo milk has a higher fat content than cow milk, while mixed with indicates an intermediate value. The moisture content of makkhan usually varies from 25 to 35% and samples have been reported to contain as much as 60%. However, the improved method should normally yield a product containing 18–20% moisture. The fat losses in butter milk can be kept at a minimum by strictly adhering to the various steps for the improved method as outlined above.

5.12 Organic Milk: Organic milk refers to a number of milk products from livestock raised according to organic farming methods. In most jurisdictions, use of the term "organic" or equivalents like "bio" or "eco", on any product is regulated by food authorities. In general these regulations stipulate that livestock must be: allowed to graze, be fed an organically certified fodder or compound feed, not be treated with most drugs (including growth hormone), and in general must be treated humanely.

There are multiple obstacles to forming firm conclusions regarding possible safety or health benefits from consuming organic milk or conventional milk, including the lack of long term clinical studies. The studies that are available have come to conflicting conclusions with regard to absolute differences in nutrient content between organic and conventionally produced milk, such as protein or fatty acid content. The weight of available evidence does not support the position that there are any clinically relevant differences between organic and conventionally produced milk, in terms of nutrition or safety.

6. BY-PRODUCTS OF DAIRY INDUSTRY

During the manufacture of dairy products by products having commercial value is produced. The by-products of the Indian dairy industry are given as under:

Table 5

Main Products	By-Products
Cream	Skim milk
Butter	Buttermilk
Ghee	Ghee residue
Chhana/ Paneer Cheese/ Casein	Whey

6.1 A chart showing the process flow is as under:

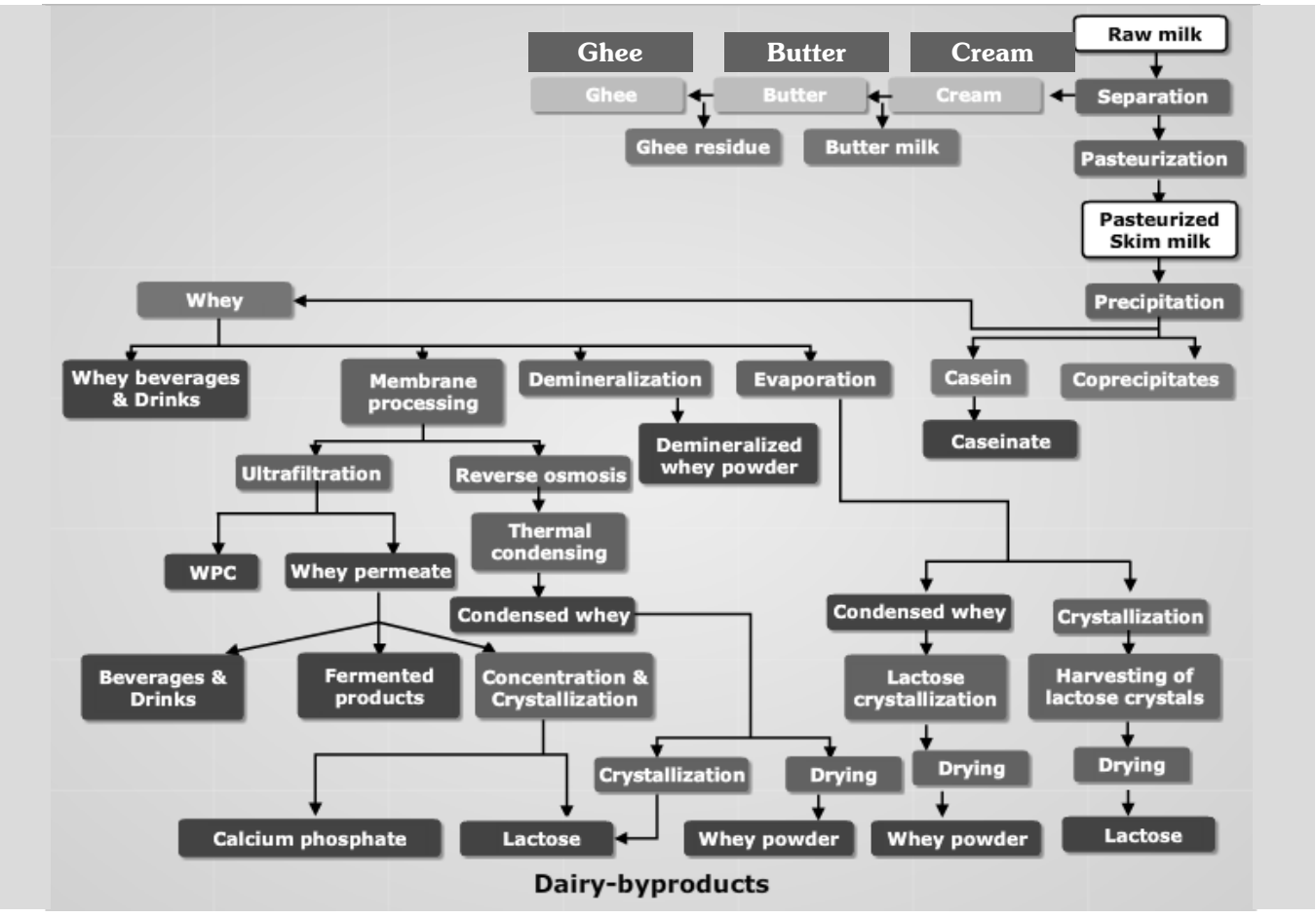


Fig. 1

7. PERSONS ENGAGED IN DAIRY BUSINESS

7.1 Private Sector: Traditionally, dairy trade is a large employment provider. It includes several hundred thousands of dudhias, gwalas, local halwais and bhattawalas, curd and chaach (buttermilk) shops. Vendors are of several types; similarly, milk contractors also vary in their business across regions. Four categories of vendors have been identified in Punjab. The first includes those who keep their own cattle shed in urban peripheries to supply milk to the city. The second category includes vendors who procure milk from village milk producers, get it standardized in local creameries by adding skim milk to it, and market it to their city customers. The third category vendors, less significant than the first two purchase skim milk from creameries, dilute it even further, and sell low-fat to low income consumers, tea stalls, and restaurants for use in whitening tea or for making curds. Small private creameries support a large class of vendors who cool the cans filled with skim milk in canals or tanks, and transport it over fairly long distances. The fourth category of vendors, who basically work as agents to milk contractors, purchase milk from producers on behalf of their principals.

7.2 Cooperative Sector: The dairy cooperative structure is a two-tier one. The village society, the first tier, is mainly concerned with milk production and collection of milk besides acting as a channel to market the production enhancement package. Depending upon the volume of business, a village cooperative employs paid staff like secretary, milk collector,

fat tester, accountant, and inseminator etc. to run its day-to-day business. Each village has a milk collection centre. The milk producer or his family members bring milk to the centre every morning and evening. At the centre, the quantity of milk is ascertained. A small sample is taken from each member for testing its quality. The Union provides each cooperative with an electronic fat-testing machine. With quality and quantity determined, the amount to be paid to each member is worked out. When he comes to the centre in the evening, his morning delivery is paid for. For milk delivered in the evening, the money is paid the next morning. As similar institutions grew in the State, marketing became inter-competitive and difficult. As a result, an apex cooperative institution-the Gujarat Cooperative Milk Marketing Federation-was formed with the prime responsibility of marketing the products manufactured by its member dairies under a common brand name 'Amul". In Gujarat, successful and dynamic dairies are in the cooperative sector namely Amul Dairy at Anand and Sagar Dairy at Mehsana.

8. SPECIAL LEGISLATION GOVERNING DAIRY INDUSTRY

8.1 Prevention of Food Adulteration Act (PFA), 1954 (Ministry of Health)

This basic statute specifies different standards of various food articles, including milk and milk products. The standards are in terms of minimum quality levels for ensuring safety in the consumption of these food items and for safeguarding against harmful impurities and adulteration. The violation of the Act can lead to both fine and imprisonment.

8.2 Milk and Milk Products Order (MMPO), 1992 (Ministry of Agriculture)

Vide Milk & Milk Product Amendment Regulations-2009 (MMPR-09), MMPO, 1992 has been renamed as MMPR, 2009.

The Government of India has notified the sixth amendment in the official Gazette on 26/3/02-Its main objectives are to regulate the manufacture, commerce and distribution of milk and milk products. Units handling between 10,000 and 75,000 litres of milk per day are required to obtain registration from the State Governments, while units handling more than 75,000 litres per day milk are required to obtain registration from the Government of India.

8.3 Standards on Weights and Measures (Packaged Commodities) Act, 1976 (Ministry of Food & Civil Supplies)

The Legal Metrology Act, 2009 came into effect from the 1st of April, 2011, replacing the Weights and Measures Act. The Act was passed with the purpose of establishing and enforcing standards of weights and measures or aspects incidental to the same. Under the Act, there are various rules, but a crucial arm of the Act is the Packaged Commodities Rules, i.e. Legal Metrology (Packaged Commodities) Rules, 2011. These rules lay down certain obligatory conditions for all commodities that are in packed form, with respect to declaration on quantities contained, including labelling.

8.4 Export (Quality Control and Inspection) Act, 1963 (Ministry of Commerce)

The Export (Quality Control And Inspection) Act, 1963 (No. 22 of 1963) as amended upto Export (Quality Control and Inspection) Amendment Act, 1984 (No. 40 of 1984) and The Export (Quality Control And Inspection) Rules, 1964 (corrected upto 30th September 1986).

8.4.1 The Export Inspection Council is responsible for the operation of this Act. Under the Act, a large number of exportable commodities have been notified for compulsory pre-shipment inspection. Recently, the Government has exempted agriculture and food products, fruit products and fish and fishery products from compulsory pre-shipment inspections, provided that the exporter has a firm letter from the overseas buyer stating that the overseas buyer does not require pre-shipment inspection from Indian government agencies.

8.5 Pollution Control (Ministry of Environment & Forests)-No objection certificate from the respective State Pollution Control Board is must.

9. DESIGNATIONS AND STANDARDS FOR VARIOUS MARKET MILK

According to the FSS Rules, 2011 (formerly PFA Rules), the standards for different classes and designations of milk in India are as follows:

9.1 Buffalo Milk: The legal standards for buffalo milk stipulate that it may be either raw, pasteurized, boiled, flavoured or sterilized milk containing minimum milk fat of 6% and minimum milk SNF of 9% in the states of Assam, Bihar, Chandigarh, Delhi, Gujarat, Maharashtra, Haryana, Punjab, Uttar Pradesh and West Bengal, whereas in states/ Union Territories like Andaman and Nicobar, Andhra Pradesh, Dadra and Nagar-Haveli, Goa, Daman and Diu, Kerala, Himachal Pradesh, Lakshadweep, Tamilnadu, Madhya Pradesh, Manipur, Karnataka, Nagaland, Orissa, Pondicherry, Rajasthan and Tripura, the minimum milk fat is 5% and minimum milk SNF is 9%.

9.2 Camel Milk: The legal standards for camel milk prescribe that it may be either raw, pasteurized, boiled, flavoured or sterilized milk containing minimum milk fat of 2% and minimum milk SNF of 6% in all the states of India.

9.3 Cow Milk: The legal standards for cow milk prescribe that it may be either raw, pasteurized, boiled, flavoured or sterilized milk containing minimum milk fat of 4% and minimum milk SNF of 8.5% in the states of Chandigarh, Haryana and Punjab whereas in Andaman and Nicobar. Andhra Pradesh, Assam, Bihar, Dadra and Nagar-Haveli, Delhi, Gujarat, Goa, Daman and Diu, Kerala, Himachal Pradesh, Lakshadweep, Tamilnadu, Madhya Pradesh, Maharashtra, Manipur, Karnataka, Nagaland, Pondicherry, Rajasthan, Uttar Pradesh, West Bengal and Tripura the minimum milk fat is 3.5% and minimum milk SNF is 8.5%. However, in Orissa the minimum milk fat is 3% and minimum milk SNF is 9%.

9.4 Goat or Sheep Milk: The legal standards for Goat or sheep milk specify that it may be either raw, pasteurized, boiled, flavoured or sterilized milk containing minimum milk fat of 3.5% and minimum milk SNF of 9% in the states of Chandigarh, Haryana, Kerala, Madhya Pradesh, Maharashtra, Punjab and Uttar Pradesh, whereas in Andaman and Nicobar, Andhra Pradesh, Assam, Bihar, Dadra and Nagar-Haveli, Delhi, Gujarat, Goa, Daman and Diu, Himachal Pradesh, Lakshadweep, Tamilnadu, Manipur, Karnataka, Nagaland, Orissa, Pondicherry, Rajasthan, West Bengal and Tripura, the minimum milk fat is 3.5% and minimum milk SNF is 8.5%.

9.5 Standardized Milk: The legal standards for standardized milk stipulate that it is used for liquid milk consumption and should contain minimum milk fat of 4.5% and minimum milk SNF of 8.5% throughout India.

9.6 Recombined Milk: It should contain minimum milk fat of 3% and minimum milk SNF of 8.5%.

9.7 Toned Milk: It should contain minimum milk fat of 3% and minimum milk SNF of 8.5%.

9.8 Double Toned Milk: It should contain minimum milk fat of 1.5% and minimum milk SNF of 9%.

9.9 Skim Milk: It should contain maximum milk fat of 0.5% and minimum milk SNF of 8.7%.

9.10 Full Cream Milk: To cater to the need of growing children and high income group people who wish to purchase the whole buffalo milk, a variant of milk called 'Full Cream Milk' (FCM) with minimum 6.0% fat and 9.0% SNF came into the market.

9.11 Toned Milk: Toned milk refers to milk obtained by the addition of water and skim milk powder to whole milk. In practice, whole buffalo milk is admixed with reconstituted skim milk.

9.12 Legal Definition: Under the FSS Rules (2011), toned milk should contain a minimum of 3.0% fat and 8.5% SNF throughout the country.

(*Note:* When milk is offered for sale without any indication of the class, the standards prescribed for buffalo milk shall apply.)

10. VOLUNTARY STANDARDS

10.1 There are two organisations that deal with voluntary standardization and certification systems in the food sector. The Bureau of Indian Standards looks after standardization of processed foods and related products. Standardization of raw agricultural produce comes under the purview of the Directorate of Marketing and Inspection.

10.1.1 Bureau of Indian Standards (BIS): BIS has standards for most of the processed foods. In general these standards cover raw materials permitted and their quality parameters, hygienic conditions under which products are manufactured and packaging and labelling requirements. Manufacturers complying with BIS standards can obtain an "ISI" mark that can be exhibited on product packages. BIS has identified certain items like food colours/ additives, vanaspati, containers for packing, milk powder and condensed milk for compulsory certification.

10.1.2 Directorate of Marketing and Inspection (DMI): The DMI enforces the Agricultural Produce (Grading and Marketing) Act, 1937. Under the Act, grade standards are prescribed for agricultural and allied commodities. These are known as "Agmark" standards. Grading under the provisions of this Act is voluntary. Manufacturers who comply with standards laid down by DMI are allowed to use "Agmark" labels on their products.

10.2 Other Regulations

10.2.1 Industrial License: No license is required for setting up a dairy project in India. Only a memorandum has to be submitted to the Secretariat for Industrial Approvals (SIA) and an acknowledgment is to be obtained. However, a certificate of registration is required under the Milk and Milk Products Order (MMPO), 1992. Vide Milk & Milk Product Amendment Regulations-2009 (MMPR-09), DIVISION (MMPO, 1992 has been renamed as MMPR, 2009.

10.2.2 Tax Laws: Market milk is exempt from the levy of any tax and duty. The rates of central excise duty on various milk products are specified in Chapter-IV of the Central Excise Tariff. The rates of Sales tax vary from State to State as it is a state subject. However with effect from 01/06/2000 sales tax will be levied uniformly by all the States as per the Uniform Sales Tax Policy announced by the Union Government. Now with the implementation of GST, milk and milk products fall under 5%, 12% and 18% tax slabs.

10.3 Regulatory Bodies in India: The Indian food processing sector maintains its quality parameters through compulsory legislation which specifies minimum standards and certification systems. Legal standards are formulated to exercise control over the quality of foods offered for sale and to safeguard the consumer from health hazards posed by possible adulteration. The three major Indian standards prevalent in the dairy industry are the FSSR, 2011 (formerly PFA), Bureau of Indian Standards (BIS) and Agriculture Produce Grading and Marketing Act (AGMARK).

10.4 Food Safety and Standards Authority of India: The Food Safety and Standards Rules of India replaces the Prevention of Food Adulteration Act which has been in use since the year 1954 for the protection of consumers against supply of inferior quality or adulterated food. Food Safety and Standards Rules came into effect from August, 2011. The standards have been formulated by the Department Of Health and Family Welfare (Ministry of Health and Family Welfare). The Act, as was under PFA, spells out standards of various food articles in terms of minimum quality for safeguarding against harmful impurities and to ensure safety. These are compulsory standards that are obligatory for any food product going into the market. Any violation of the rule can lead to fines and imprisonment.

10.5 Bureau of Indian Standards: Bureau of Indian Standards, formerly the Indian Standards Institution (ISI), was established as a statutory body under the Ministry of Consumers

Affairs in 1986. BIS specifies standards for goods manufactured in the country in consultation with the experts drawn from manufacturing units, research and technical institutions, purchase organisations and other concerned parties. In the processed food sector, the formulated standards are implemented through voluntary and third party certification systems. These standards are amended suitably from time to time and cover the permitted raw materials and their quality parameters, hygiene rules for manufacturing, packaging and labelling requirements. Manufacturers complying with these standards can obtain 'ISI' or 'BIS' certification and exhibit the same on their product package. The various certification schemes operated by BIS are 1) BIS Product Certification Scheme, 2) Quality Scheme Certification as per IS/ ISO 9000 series, 3) Environmental Management System as per IS/ ISO 14000 series and 4) Hazard Analysis and Critical Control Point (HACCP) as per ISO-15000.

10.6 AGMARK: The Agriculture Produce Grading and Marketing Act was first enacted in 1937 to prescribe grade standards for agricultural and allied commodities. The standards came to be known as Agmark standards and are formulated by the Directorate of Marketing and Inspection (DMI), under Ministry of Agriculture (Government of India). Agmark categorizes the commodities into various grades (for example, Special and Standard). Grading under this act is voluntary. Manufacturers who comply with these standards are allowed to use 'Agmark' logo on their products to give the consumers an assurance of quality in accordance with the standards laid down. Three dairy products (ghee, butter and dairy spreads) are currently graded under this scheme.

10.7 Milk and Milk Product Order (MMPO): All dairy plants processing more than 10,000 litres of milk per day or handling more than 500 tonnes of milk solids per annum are now required to obtain registration certificates from the competent authority. This was the result of setting up of an Advisory Board in 1992, by the Government of India for guidance on production, sale, purchase and distribution of milk and milk products. Dairy plants processing up to 75,000 L per day or equivalent quantity of milk solids per annum need to be registered compulsorily with the Directorate of Animal Husbandry in respective states, while those handling more than 75,000 L per day have to register with Department of Animal Husbandry of Central Government. This order has also defined milk-shed areas, so as to restrict uneven procurement and marketing of milk and set rules for production, hygienic conditions, packaging, labelling, marketing and penalty.

10.8 Export (Quality Control and Inspection) Act: Enacted in 1963 and operated by the Export Inspection Council of India, this act works under the Department of Commerce. It stresses on compulsory inspection of the manufacturers' premises, human hygiene, quality of raw material purchased, hygienic manufacturing practices followed, quality assurance programmes followed, packaging and labelling at the production centre for the exportable product. A certificate has to be obtained from the Council before the consignment is cleared for export for each batch. The act covers compulsory pre-shipment examination of a large number of exportable commodities. The quality control and inspection of export product is administered through a network of officials located at the main production centres and port of shipment.

10.9 International Standards in the Indian Context: The Codex Committee on Milk and Milk products (CCMMP) was established in 1993 to cater to new scientific and technological developments and accordingly revise the existing standards. Eleven standards of Codex have been revised and adopted by the CAC over the years. A few of the altered ones as a consequence of Indian intervention deal with the definition of milk, inclusion of ghee in the standard Milk Fat Product, incorporation of BHA as an antioxidant and removing the restriction of permitting only cow milk as a raw material particularly for cheeses. Concerted efforts by India at the IDF as well as CCMMP led to accepting the suitability

of buffalo milk for cheese making. This was a boon to the subcontinent as India and Pakistan account for 92 per cent of the world's buffalo milk. Despite these efforts, several anomalies still exist in the two standards.

10.10 Harmonization of the Indian Standards with International Standards: The WTO accepts the international food standards/ guidelines/ codes related to food hygiene and sanitation formulated by the codex as the reference points for the global food trade. Most of the national food standards would have to be harmonized with those of codex and the dairy industry would be required to comply with them. In India, the food safety regulations, whether mandatory or voluntary, are implemented by different agencies/ ministries/ departments. The presence of multiple agencies to implement multiple laws poses a problem of fixing responsibility. It is, therefore, necessary to have uniform and logical approach for regulating the quality of food and for harmonizing with the international regulations.

11. TAX INVESTIGATIONS

11.1 General

11.1.1 The ingredients of milk which are important for investigation are fats and SNFs (Solids-Not-Fat). In market milk fats vary whereas SNF remains constant. Buffalo milk contains 6–7% fats whereas cow milk 4–4.5%. Milk is marketed under different names; toned, standardised, whole milk which have 3%, 4.5% and 6% fats, respectively. In order to make marketable milk under different categories an adjustment/ variation in fats are necessary. Fats content in the milk is reduced by not adding water but by taking away cream i.e. fats. Cream contains 40% fat. 100 kg of cream contains 40 kg fats and 60 kg serum, mainly consisting of SNF, vitamins, mineral, proteins etc. From 100 litres (6% fat) milk & 8.5% SNF, if 3% fats are taken out, it would give 92.5 litres of milk of 3% fat & 3 kg of fat (in volume terms 7.5 litres of cream). Refer *Case 1* discussed later.

11.1.2 During summer season when the supply is less, skimmed powder is dissolved in water and added with milk having more fats. Skimmed powder is fat less powder having SNF 95%. Thus fats in the milk is varied either by taking away cream or by adding solution made from skimmed powder.

11.1.3 The minimum standards prescribed by the PFA (1976) rules for cow milk are 3–4% fat and 8.5–9% solids-not-fat, while those for buffalo milk are 5–6% fat and 9% solids-not-fat throughout the country.

11.1.4 Purchase Rate: In dairy, milk is the raw material. In Gujarat, the purchase rate of milk depends upon the fat content, i.e. higher the fat higher the price. The buffalo milk fetches more price than cow milk as buffalo milk is rich in fat. In states like Maharashtra, the purchase price depends on the Fat and SNF (Solids-not fat) content in the milk and payment is made on the basis of fat unit. The fat plus 2/3 rd of SNF is equivalent to one Fat unit. For example, if milk of 6% fat & 9% SNF cost Rs. 36/-per litre, the price per fat unit is Rs. 3/-(6 fat + 2/3 rd of 9 (SNF) = 12 fat units.) In Gujarat, though the price is paid on the basis of fats, yet the SNF content is important & its content should not be less than 8.5. SNF below 8.5 means that supplier has mixed water.

11.2 Unaccounted Purchases & Sales

11.2.1 In order to find out unrecorded purchases & sales, it is necessary to prepare the trading account in terms of fats quantity. How much fats have been purchased, can be found out from the purchase register and how much used by multiplying Sales & closing stock of various items with fat conversion ratio given in **Annexures 1,2, &3** at the end of the chapter. If the consumption is less than the purchases, it means all sales are not being accounted for. There is possibility of excess stock of unaccounted items at the business premises. Survey action in such cases would be very useful. Similar exercise can be carried out for total SNF purchased, consumed and reflected in sales and closing stock. In short,

quantitative tally should be prepared in terms of fats and SNF instead of milk as raw material and finished goods as various milk products.

11.2.2 Ice Cream is one of the most produced milk product. It broadly has the following composition:

i. Greater than 10% milkfat by legal definition, and usually between %10 and as high as %16 fat in some premium ice creams.

ii. 9 to 12% milk solids-not-fat (MSNF): this component, also known as the serum solids, contains the proteins (caseins and whey proteins) and carbohydrates (lactose) found in milk.

iii. 12 to 16% sweeteners: usually a combination of sucrose and glucose-based corn syrup sweeteners.

iv. 0.2 to 0.5% stabilizers and emulsifiers.

v. 55% to 64% water which comes from the milk or other ingredients.

vi. Dry fruits and other solids such as caramel, chocolate etc.

11.2.2.1 These percentages are by weight, either in the mix or in the frozen ice cream. Please remember, however, that when frozen after processing, about 40% of the volume of ice cream is air (i.e overrun) so by volume in ice cream, these numbers can be reduced by approximately 40%, depending on the actual air content. However, since air does not contribute weight, we usually talk about the composition of ice cream on a weight basis, bearing in mind this important distinction. Since ice creams are sold in volume, weight per litre is necessary for working out of consumption of raw material and yield which may be obtained by Assessing Officers by actual weighing the samples. Similar exercise may be done for other products.

11.2.3 Trading account of market milk in terms of litres may also be prepared. Quantity must tally after allowing weightage on account of burning, handling losses. The capacity of the Pasteurisation plant multiplied by the number of days for which it worked during the year will give an idea as to how much milk can be processed. The total sales made in term of litres normally should tally with the capacity of the milk plant. If the milk processed on the basis of capacity is more than sold, there can be understatement of sales. If purchases are more than the sales (in litres) there may be either bogus purchases or unrecorded sale. During lean season i.e. when the milk supply is less, the assessee prepares solution by adding skimmed powder in water. How much skimmed powder has been purchased by the assessee during the year would determine how much additional milk in litres can be made by the assessee. Fats are also added to obtain the standard milk. Thus while making the trading account in terms of litres, it is also necessary to account the milk produced from the skimmed powder and fats. Normally lean season starts from 15th March and continues up to 15th September in Gujarat.

11.3 Water: Where the consumers are not very quality conscious but cost is only consideration particularly in the localities of poor people, milk suppliers do add water and reduce the price to some extent. Normally these people use the milk only for the preparation of tea, therefore, they are not very much bothered about the quality of the milk. Thus more profit is earned than the normal profit. Therefore, it is necessary for the AO to find out who are the customers of the assessee and thereafter methodology for investigation can be decided.

11.4 Mixing Vegetable Oil: Private dairy operators sometimes adopt unscrupulous means. Among other means, one is of mixing of vegetable oil. Vegetable oil in the market costs Rs. 150/- to Rs. 200/- whereas the milk fat costs Rs. 450/- to Rs. 500/- per kg depending upon the season. Thus, if there is excess supply of milk than purchased, the chances are that the assessee might have used vegetable oil for mixing. With the homogenizer, the vegetable oil can be mixed in the water and after adding some flavors, it gives smell and odour of the natural milk.

11.5 Investment in Advances: The dairies engaged in the private sector have to complete with their counter parts in Government and Cooperative Sectors. Milk is the basic raw material and therefore, constant and regular supply of the milk is very essential. One day's interruption in the supply may cost heavily. To ensure the regular supply particularly during the lean season, huge advances are given to the milk producers/ milk transporters depending upon the mode of procurement of milk. Big suppliers may be identified from the assessee's books and thereafter payment receipt register/ Bank statement of big supplier may be called for and then cross checking could be done with the assessee's payment register/ bank statement so as to locate unexplained deposit in the bank account of the suppliers. Quantum of advances are very huge. If the capacity of the plant is to process 1 lakh litre per day (big dairies process 3 to 5 lakh litres per day) and the average price of milk is Rs. 32/- to Rs. 40/- per litre, then to have the regular supply for a month, assessee may have to advance about Rs. 9.6 crores (30 lakh litres of milk x Rs. 32/- (rate). Therefore, source of investment in advances must be examined by the Assessing Officer.

11.6 Project Report: In big dairy where investment is substantial, for taking the financial help from the banks/ financial institutions, project report is submitted. Information disclosed in the project report is immensely helpful for understanding the assessee's business, sources of finance, capacity of the plant, financial worth of the directors/ partners and their activities etc. More important is that the project report also forecasts the mode of payment, gives the details of the projected sales and other sources of income. It may also provide information about the recovery of the fat, which will be helpful in evaluation of the assessee's claim with reference to the fat loss.

11.7 Electricity: The monthly production *vis-à-vis* units of electricity consumed may give an idea in which month there is a variation, i.e. whether the electricity consumed is in conformity with the milk produced. Units of electricity consumed may be taken from the actual electricity bills and production from the production register. In the month where there is large variation, purchases as well as sales may be verified by making cross verification from the accounts of suppliers and distributors of milk.

11.8 Overstatement of Facts: Prevention of Food Adulteration (PFA) Act requires to display fat & SNF content on each and every packet. In many cases, it is found that the fats, displayed on the packet, is more than the milk actually contains. Thus, the assessee shows more fat consumption. The Foods and Adulteration Department which checks the various irregularities committed under PFA works in the office of Municipal Corporation (Health). Information gathered from the department may be useful for establishing that the assessee has over displayed the fat content on the packet.

11.9 Under Filing: Standard of Weights and Measures Act (Packaged Commodities Rules) grants a maximum permissible error of 10 ml in 500 ml pack but in reality, it is found that often there is a under packing of the milk which is more than permissible limit. Thus, less quantity of milk is supplied. The above modus operandi is witnessed particularly in the case of private dairies. Metrology Department (Ministry of Civil Supplies) is concerned with the accuracy in measurement. Information about the persons involved in under measurement may be collected from the district supply office.

11.10 Half Yearly Return: Milk and Milk Products Order (MMPO) 1992 requires Dairy units to obtain Registration from the State Government if their milk handling is between 10,000 to 75,000 litres per day, while Units handling more than 75,000 litres per day are required to obtain registration from the Central Government. Each such unit is also statutorily required to submit half yearly return **(Annexure 4)**. The return contains detailed information of fats, SNF (Solids-not-fat), milk procurement prices in terms of per kg. Milk, per kg. fat and per kg. SNF, how much whole milk powder, skimmed powder, butter oil and white butter are used for producing milk and vice-versa

i.e. from, how much milk how much whole milk powder, skimmed powder, butter oil and butter are produced, detailed sales of milk and milk items. Joint Director of Animal Husbandry and Dairy (Ministry of Agriculture) is the controlling authority in the State Government and Joint Secretary, Dairy, (Ministry of Agriculture) in the Central Government. Units handling milk more than 10,000 and up to 75,000 litres per day have to submit the half yearly return to the State Government and those handling more than 75,000 litres per day to the Central Government. This half yearly return may be helpful in detecting the discrepancies and thereafter in deciding the mode of inquiry/ investigation.

11.11 Certification: For ISI and Agmark, dairy units have to comply with the standards laid down by the Bureau of Indian Standards. These standards have been formulated by specialized Sectional committee of the BIS Food & Agricultural division council (FADC), which have representatives of manufactures, consumers, Government agencies, scientists and technologists. These standards require the producers to disclose the ingredients of the products in alphabetical order and also batch wise sampling. The information gathered from this department may be useful in knowing as to whether the assessee has been found guilty of any violation of any standards which has the effect on determination of income.

11.12 Gross Profit: Following examples illustrate working of the gross profit margin and applying of conversion ratio:

Case 1: Buffalo milk–litres (6% fat, 8.5% SNF) – Sold as liquid milk of 3% fat and balance 3% fat converted to butter/ ghee. Calculate yield per 100 litres of milk.

Toned milk–3.0% fat	92.5 litres (Volume reduction by 7.5 litres i.e. 2.5 times of 3 kg.)
Cream (40%)	contains 3 kg. fat (in terms of volume=7.5 litres)
Ghee conversion @ 96% of cream	2.88 kg.

Income	Rs.
By the sale of 92.5 litres of toned milk (3% fat) @ Rs. 25/ litre	2,312.50
By sale of 2.88 kg ghee @ Rs. 450/ Kg.	1,296.00
Total	4,508.50
Gross margin per 100 litres after deduction of purchase cost of milk @ Rs. 3, 200/- (Rs. 4,508. 50–3, 200)	1,308.50
Gross margin/ litre of milk	13.09

Case 2: Buffalo milk-100 litres (6% fat, 8.5% SNF) – Converted to butter and skimmed milk powder. Calculate yield per 100 litres of milk.

Products	Kg
Butter	7.2
Ghee, after conversion of 7.2 kg of butter	5.76
Skimmed milk powder (SMP)	7.8

Option-1(SMP and Butter)	Rs.
By sale of 7.8 kg SMP @ Rs. 120/kg	900.00
By sale of 7.2 kg butter @ Rs. 500/kg	3,600.00
Total	4,500.00
Gross Margin per 100 litres of milk after deduction of purchase price of milk at Rs. 3, 200/- (Rs. 4,500–3,200)	1,300.00
Gross margin/ litre of milk	13.00

Option-2(SMP and Ghee)	Rs.
By sale of 7.8 kg SMP @ Rs. 120/kg	900.00
By sale of 5.76 kg ghee @ Rs. 550/kg	3,168.00
Total	4,068.00
Gross Margin per 100 litres of milk after deduction of purchase price of milk at Rs. 3,200/- (Rs.4,068–3,200)	868.00
Gross margin/ litre of milk	8.68

ANNEXURE–1

Approximate Milk Equivalent of Milk Products

Product	kg Product Per 100 kg Milk		kg Milk Required for 1 kg Product	
	Buffalo Milk 6% fat +9% SNF	Cow Milk 4% fat +8.5%SNF	Buffalo Milk	Cow Milk
Skim milk	85.2	90.2	1.2	1.1
Butter milk	7.6	5.1	13.2	19.6
Cream, 40% fat	14.8	9.8		10.2
Butter	7.2	4.7	13.9	21
Ghee	5.7	3.8	17.5	26.3
Dahi	91	77	1.1	1.3
Chhana	24.3	20	4.1	5
Khoa	21.7	18	4.6	5.6
Conc.milk(50% solids)	30	25	3.3	4
Skim milk powder	9.5*	9.0*	10.5**	11.0**
Whey milk powder	15.5	12.9	6.5	7.8
Cheese Cheddar	13.6	10.4	7.4	9.6
Cottage Cheese	6.9*	6.2*	14.8**	16.1**
Raw Casein (wet)	7.5*	6.8*	13.6**	14.8**
Whey	86.4	89.6	1.2	1.1

*kg per 100 kg of skim milk

**kg skim milk required

Source: Dairy India 1997 (Fifth Edition, Page 364)

ANNEXURE–2

Average Weights of Different Types of Milk and Creams

One Litre of	Average Weight
Cow milk (3.5% fat)	1,030 gm
Buffalo milk (6% fat	1,028 gm
Full Cream milk (6% fat)	1,028 gm
Standardized milk (4.5% fat)	1,029 gm
Toned milk (3.0% fat)	1,032 gm
Skim milk (0.01%)	1,036 gm
Cream with 20% fat	1,013 gm
Cream with 30% fat	1,002 gm
Cream with 40% fat	993 gm

Approximate Yields of Selected Dairy Products from Milk

100 kg Each of Whole Milk	Yields
With 4.0% fat	4.75 kg butter
With 4.0% fat	13 kg whole milk powder
With 3.5% fat	9.45 kg cheddar cheese with 37% moisture
100 kg skim milk with 9.5% solids	9.8 kg skim milk powder
	16.1 kg cottage cheese
	7.5 kg wet casein
	3.5 kg dried casein

Source: Dairy India 1997 (Fifth edition) page 370

ANNEXURE–3

Requirement of Milk to Make 1 kg of Selected Dairy Products

To Make One kg of	Milk Required
Burfi	3 litres of milk with 6% fat
Butter	13 litres of milk with 6% fat
Cheese (cheddar ripened)	10 litres of milk with 3% fat
Channa	8 litres of milk with 3% fat
Condensed milk	2.44 litres of milk with 3.7% fat,9% SNF
Cream (40% fat)	11.11 litres of milk with 6% fat
Curd/ Dahi/ Yogurt	1 litre of milk
Evaporated milk	2 litres of milk with 4.5% fat 9%SNF
Ghee	18 litres of milk with 6% fat
Gulab jamuns	1 litre of milk with 6% fat
Ice cream mix	1.6 litre of milk with 6%
Khoa	5 litres of milk with 6%
Kurchan	8 litres of milk with 6% fat,9% SNF
Mishti Doi	1.2 litres of milk with 6% fat
Paneer	5 litres of milk with 5% fat
Peda	3 litres of milk with 6% fat
Rabri	8 litres of milk with 6% fat, 9% SNF
Rasagolla	1.5 litres of milk with 3% fat
Srikhand	2.2 litres of milk with 3% fat
Skim milk muska	5 litres of skim milk
Skim milk powder	10.5 litres of skim milk
Whole milk powder	7.5 litres of milk with 4% fat

Source: Dairy India 1997 (Fifth edition) Page 370

ANNEXURE–4

FOURTH SCHEDULE

(Milk and Milk Products Order, 1992)

Half Yearly Return

(See of Paragraph 14)

For the period ending……

Name of dairy Plant/ Unit/ other:

Establishment/ Premises (with address):

Name of holder of Registration Certificate

Town/ District _____

State _____

Registration Number

Date of issue_____

Stock Position

	Fat (MT)	**Solids-not-fat (MT)**
Opening Stock		
Receipts		
Dispatches		
Closing stock		

Milk Procurement

Source of Procurement	**Type of milk**	**Total Qty(MT)**	**Total Fat (MT)**	**Total SNF(MT)**	****Prices Rs/kg of milk**	****Prices Rs./kg of fat**	***Prices Rs./kg of SNF**	**Remarks**
Village milk Prod.Coop. Societies	Cow Buffalo Mixed							
Milk Producers Coop. Unions/ Federations	Cow Buffalo Mixed							
Other agencies	Cow Buffalo Mixed							

** Annexe details regarding names, location etc. Indicate landed price of milk.
MT – Metric Tonnes
Rs./ kg – Rupees per kilogram

Reasons for Conservation of Commodities

Total Half Yearly (MT)

Commodities used for_____

Commodities	Whole Milk Powder	Skimmed Milk Powder	Butter Oil	White Butter
Combined milk for sale				
Other milk products				

Product Manufactured

Product	Qty Produced (MT)	Average Fat/ SNF	Product Qty (MT)	Average Fat/ SNF
1. White Butter				
2. Table butter				
3. Ghee				
4. Skimmed milk powder				
5. Whole milk powder				
6. Infant food				
7. Malted food				
8. Chocolate products				
9. Cheese				
10. Any other article containing milk or milk product				
11. Ice cream				
12. Yogurt				

Qty. – Quantity
MT – Metric Tonnes
SNF – Solid-not-fat

Milk Sold Directly in Towns (Name)	Packing (Specify)	Total Quantity During the Period (.000L)	Average Fat/SNF	Consumer Price (Rupees per Litre)

Milk Supplied to other Dairies (Name of Dairy)	Total Qty. during the Period (.000L)	Average Fat/ SNF	Price (Rupees Per Litre)

Product Marketing

Product	Opening Stock	Quantity Sold During the Period (MT)	Closing Stock (Metric Tonnes)	Average Selling Ex-Dairy (Rs/ Lit.)
1. White butter				
2. Table butter				
3. Ghee				
4. Skimmed milk powder				
5. Whole milk powder				
6. Infant food				
7. Malted food				
8. Chocolate products				
9. Cheese				
10. Any other article containing milk or milk product				
11. Ice cream				
12. Yogurt				

Place:

Signature

Date:

CHAPTER

5

Flour Mills

1. INTRODUCTION

1.1 Wheat and rice provide staple food to world's entire population. Wheat is the most widely used cereal food grain of the world directly by human species. The following table shows production of five major cereal crops in the world:

Table 1: Food Grain (MMT)

	2018	2017	2016	2015	2011	1961
Maize	1074	1047	1087	978	888	205
Rice	517	509	504	495	484	285
Wheat	731	760	761	736	699	222
Barley	141	142	146	149	133	72
Sorghum	59	58	67	66	58	41

1.2 Though maize is a major crop but as far as direct human consumption is concerned wheat and rice are preferred cereal grains. Maize is mainly used in manufacturing of cattle/ poultry feed and for brewing purposes. Wheat grows in every climate. In terms of area and production, it is on third place after maize and rice.

1.3 Flour mills, which are sometimes referred to as grain mills, break down the grain into smaller parts and separate them. These machines can range in size from a small version that will fit in the kitchen, to a large commercial version made for manufacturing space. Both do essentially the same thing, with the difference being in the volume. Small machines are made for personal use and can usually grind enough grain to make products for the family. Large machines are used by food companies to produce mass quantities for sale as a commercial good.

1.4 In a commercial mill, the grain is cleaned then "tempered", which means the grain is soaked in water to enlarge its moisture content to make it easier to roll. After it's tempered, the grain is moved through a series of rollers, which break up the grain into its separate parts: endosperm, bran and germ. Each Section creates a different type of four, with separate properties and textures. The endosperm can be grounded down into a finer texture, so it is used for the white variety. For the whole wheat variety, the equipment adds the bran and germ back in.

1.5 Different varieties of wheat, grown under diverse conditions of soil, climate and pedigree, vary greatly in appearance and characteristics. In appearance wheat may be red or white according to the colour of the bran or outer skin

of the grain; in characteristics it may be hard or soft, strong or weak. To the miller the most important qualities are strength, colour, flavour and flour yielding properties. In general, red wheat are stronger than white, but white wheat produces flour of better colour.

2. FLOUR MILLS GRIND

2.1 Flour Mills grind wheat to get various products used as staple food in a large area of our country. The main stages of operation are:

i. Purchase and storage of wheat.

ii. Cleaning and preparing the wheat for milling.

iii. Milling the wheat into maida, suji, atta, bran etc.

iv. Packing, storage and dispatch of finished goods.

2.2 The different products resulting from grinding of wheat are:

2.2.1 Wheat Flour: This is generally known as whole meal flour from which Suji and Rawa are not separated, and includes bran. The sale price is lower than that of Maida. If Suji and Rawa has been removed, then the flour sells at cheaper rates.

2.2.2 Suji: After first and second grinding the bigger pieces of the outer layer of wheat are separated by straining and is known as Suji. It fetches the highest sale price.

2.2.3 Rawa: As a result of the third and subsequent grinding the smaller particles of the outer layer of wheat are separated by straining. This product known as Rawa, fetches the second highest price.

2.2.4 Maida: The very finely ground flour is strained to remove bran, and the fine flour is again ground into a homogenous powder which is then made to pass through an electric spark chamber which bleaches the power snow white. This white powder is known as Maida or fine flour. This fetches the third highest price.

2.2.5 Dalia: As a result of first grinding the bigger pieces of outer layer of wheat are separated by straining and are known as Dalia. Its pieces are bigger than that of Rawa. It is normally consumed with Milk.

2.2.6 Bran: It is normally known as 'choker'. It mainly consists of bran and some poor quality of flour. It is normally used as fodder for cattles.

2.3 The quality of these products depends on the quality of wheat and the process of grinding. Different varieties of wheat are grown in India but wheat flour is normally sold in fewer varieties. Various varieties of wheat are ground together and therefore, one quality of wheat flour is sold from a particular flour mill.

2.4 There are two types of flour mills, namely, Atta chakki and Roller flour mill.

2.5 Atta Chakki

2.5.1 These are small flour mills, normally situated in rural areas and smaller towns. The income of each chakki is generally below taxable limit. Therefore, these are not of much importance from the point of Income-tax. However, following points require to be looked into during investigation of such cases.

2.5.2 Normally Atta chakki owners do not maintain books of accounts. Instead, they maintain a "Pisai register" giving details of weight of grain ground, the amount charged etc. in a chronological order. The grinding charges, now-a-days, vary from Rs. 2.50 to 3.50 per kg or even higher in bigger towns. It may be noted that no standardization of this type of charge exists. The AO can call for Pisai register to verify gross receipts. The quantity of fuel, i.e. diesel or electricity can be correlated with the quantity of wheat ground. Normally fuel charges are 25–30% of Pisai charges.

2.5.3 Often the owners of chakkies retain ¼ to ½ kg of flour per 10 kg of the grain ground in addition of the grinding charges. This is known

as "Karda". It is a regular source of income. The weight of flour so received can be worked out by finding out the total weight of the grain ground either from the Pisai register or with the help of fuel consumption figures.

2.5.4 It should also be seen whether the person is running other chakkis at different places either in his own name or in the name other persons from local enquiries. There may be indications in accounts by way of cash credits, other deposits etc. Sometime Atta Chakki owners have other manufacturing units e.g. oil extraction plants, cotton carding and ginning, masala chakki, dhankutti machine (small rice mill) and saw mill.

2.6 Roller Flour Mill

In a commercial mill, the grain is cleaned then "tempered", which means the grain is soaked in water to enlarge its moisture content to make it easier to roll. After it's tempered, the grain is moved through a series of rollers, which break up the grain into its separate parts: endosperm, bran and germ. Each Section creates a different type of four, with separate properties and textures. The endosperm can be grounded down into a finer texture, so it is used for the white variety. For the whole wheat variety, the equipment adds the bran and germ back in.

2.7 Process Description for Wheat Flour

A modern milling operation involves much more than grinding wheat to a powder. Three general operations are usually involved: cleaning, tempering, and milling. Cleaning removes unwanted material; tempering softens the grain, making it easier to separate and grind; and milling involves grinding the wheat and isolating wheat components of a specific size.

i. **Cleaning:** Wheat unloaded from a truck, into a mill elevator contains a sizable percentage of non-wheat kernel components, termed "dockage." Dockage consists of other types of seeds, underdeveloped or unsound wheat kernels, insects, stems, stones, and other debris commonly found in a wheat field. Before milling, this debris must be removed, and this is accomplished in the wheat cleaning Section of the mill. Although numerous machines exist to clean wheat, they are all classified based on separation by size, shape, density, and magnetism. Different mills vary greatly with respect to the order of the operations in a cleaning process. Usually, one of the first separations removes any ferrous metal in the wheat using magnetic separators. Removing metal early in the process helps avoid damage to equipment farther downstream. A milling separator may be next, to remove sticks, stones, stems, and other plant debris.

Lighter, less-dense components in the wheat are removed here via aspiration. Air circulates upward through the grain as it is fed into the separator, and lighter material is drawn away from the wheat kernels. The wheat then falls onto a sieve, which allows the wheat to pass through but retains stones and larger seeds. Another sieve follows which retains the wheat and allows smaller seeds to pass through. A disk separator, which separates wheat from other grains of equal density, is also likely to be included in the cleaning process. This machine separates grains based on shape. Pockets in rotating disks accept seeds of certain lengths and reject those of other sizes. Generally there is more than one disk separator. One will accept wheat and another will reject wheat to remove both larger and smaller grains. Dirt or mold adhering to wheat kernels is largely removed using a scourer. This machine uses a screen or an abrasive surface to remove any material adhering to the kernel. Materials such as small stones similar in size to a wheat kernel are separated based on density in a gravity table or dry stoner. The gravity table is an oscillating inclined plane. Denser material

such as stones moves down the table faster than lighter material. The dry stoner removes the dense material with aspiration sufficient to raise the grain and allow the stones to drop out.

ii. **Tempering:** Is the addition of predetermined amounts of water to wheat during specific holding periods. It toughens the bran, making it easier to separate from the endosperm and germ. It also softens the endosperm, allowing it to break apart with less force. Tempering involves adjusting the moisture level of the wheat. For soft wheat, optimal tempering brings the grain to 13.5–15.0% moisture and takes 6–10 hr. For hard wheat, the final moisture is 15.5–16.5%, and tempering times are 12–18 hr. Incoming wheat is generally lower in moisture content than this; hence, water is usually added and the grain is allowed to equilibrate for a period of time. This time varies considerably based on the hardness of the wheat. Conditioning of wheat refers to the application of heat in the tempering process to increase the rate of penetration of moisture into the kernels. Temperatures lower than 50°C are employed during conditioning to ensure that the functionality of the flour components, especially the gluten, is maintained.

iii. **Milling:** At this point, the wheat is ready for milling and starts through the various systems in the mill. The first machine in almost every mill is the roller mill. Two rolls, one rotating clockwise and the other counter-clockwise, are separated by a small distance called the "gap." One of the rolls usually rotates faster than the other one. Consequently, at the nip, due to the rotation of the rolls the wheat experiences a shearing action as well as a crushing action. The first roller mills are employed in the break system. This is the part of the milling operation designed to remove the endosperm from the bran and germ. Rolls in this process have spiral grooves called "corrugations" cut parallel to the long axis of each roll. Generally there are about five roller mills or five "breaks" in the system. The germ is removed in the first two breaks, as is much of the bran. The germ is pliable and tends to flatten when it goes through the rollers. Bran particles are usually in the form of low-density small flakes. These properties allow millers to separate the germ and bran fractions from the endosperm fraction. After each break, a set of sieves and/ or purifiers (aspirators) separates the ground material by size and density.

iv. **Sieving:** Small particles are channeled into the flour, and large particles are either removed (as is the case with the germ and bran) or sent to the next break (as occurs for large endosperm pieces). Once the endosperm is isolated, the large particles that result (called middlings) are reduced in the reduction system to a particle size distribution consistent with flour. This means they must be able to pass through a 136-μm opening. The rollers in the reduction system are smooth and are operated at low differentials, providing a crushing action that yields the fine particles of flour (although a small amount of shear is still important). A large percentage of the particles composing the final flour come off the reduction rolls. Flour from the break and reduction rolls may be combined in many ways to create different types of flour, but it is usually sifted again in the flour dressing system and passes through sieves meets the particle size standard for flour. Larger particles are recirculated back to the appropriate point in the grinding process. The flour may be further treated with chlorine or a bleaching agent depending on the requirements of the customer. In the mill feed system, the germ and bran are separated from each other, and adhering endosperm is removed. The coarse bran from the early breaks is

termed "bran" and composes about 11% of the total products from the mill. The finer branny material from the later steps is called shorts; it represents about 15% of the total. Germ is generally recovered at the rate of about 2–3.0% of the total wheat depending on the type of equipment used. These special products or ingredients for human consumption are usually sold as animal feed in our country.

3. ACCOUNTS MAINTAINED

3.1 Apart from the usual books of accounts like Cash book, Journal, Ledger etc, Roller mills maintain certain distinctive books of accounts which are as under:

3.1.1 Wheat Receipt Register: This is an important register as it indicates order-wise details of delivery order, number and weight of bags received, origin of the stock etc.

3.1.2 Wheat Stock Register: This provides details regarding daily opening stock, grain received, grain issued for grinding, and closing stock in gunny bags and weight.

3.1.3 Production Register: This records the output of the mill showing date-wise details of wheat crushed and production of all items like flour, suji, maida, bran, broken wheat dust, and husk.

3.1.4 Sales Ledger: This shows the opening stock, production, issues and closing stock of each day in respect of the various products detailed above.

3.1.5 Wheat Godown Register

3.1.6 Grinding Register (i.e. total grain in godown and in process).

3.1.7 Hourly Production Register

a. Daily production report for goods received.

b. Gate keepers report for goods received.

c. Wheat receipt notes.

3.2 The mills also keep subsidiary and miscellaneous records, such as, Order book, purchase invoices, sale bills, empty gunny bag register, store register, gate pass record, delivery records, vouchers etc. In States like Uttar Pradesh and Uttaranchal where the wheat is subject to Mandi tax, the flour mills are authorized to purchase the wheat from the farmers directly. It is mandatory to maintain the 'Satti Bahi' where all incoming and out-goings of wheat and wheat products are recorded, along with the day-to-day stock register. The wheat is purchased from the farmers on Receipts (Form 6R) and from the Commission Agents on Receipts (Form 9R).

4. TAX INVESTIGATIONS

4.1 Unaccounted Milling of Wheat

4.1.1 Unaccounted milling of wheat and manipulation in quantities of products are not directly reflected in the books but they can be checked by referring to power consumption. The main power for production is electricity or diesel. Normally for grinding of one quintal of wheat 5.5–7.5 units of electricity or 1.75–2.25 litres of diesel is consumed. Verification of consumption of electricity/ diesel against quantity of wheat milled for the peak period with that of the other periods during the year or for earlier years can bring out the manipulations.

4.1.2 In one case the AO while scrutinizing a large payment for electricity charges came across the fact that wheat milled for a particular month was more than what the Wheat stock register was indicating. On being confronted with this anomaly, the mill came up with the plea that through some stock of wheat had been purchased the same remained to be entered in the Stock register through oversight. The reason offered was not found in order and consequently resulted in addition to its income.

4.2 Manipulation in Quantities of Production: The product yield from a given weight of wheat will vary with the quality of wheat,

state of the machinery etc. However a rough indication of proportionate yields is given below:

Product Yield	%
Maida	45–50
Rawa or Suji	10–15
Resultant Aata	about 20
Bran	about 20

The AO should analyse the Production register as this is the base for all the subsequent production charts. While analysing the production figures the AO should note the variations in proportionate yield. While slight variation is bound to occur in any given mill, it is the significant variation which should attract attention. These figures should then be cross-checked with the Stock register for each product. Sale bills or vouchers relating to the relevant product should also be scrutinized very closely. Similarly, the entries in the Gate pass register should be verified with the entries in Stock register.

4.3 Inflated Percentage of Refraction

4.3.1 A common method of suppression of profit by the flour mills is inflating the percentage of refraction. Refraction means impurities in wheat, mainly small gram, shriveled wheat, grain husks etc., which are removed from wheat during the cleaning process. Normally, it is collected in gunny bags through the outlets in the machines, such as receiving separators. These gunny bags are weighed and daily record is kept of the same. It is generally sold to the poor or as bird feed at low rates.

4.3.2 The sale proceeds of refraction form a part of the income of the mill. Depending on the quality of the wheat, refraction ranges from 2.5–5% of the total weight of the wheat milled. Some mills suppress the output of maida, suji etc. by showing a high percentage of refraction. This method is highly attractive to the mill, because while maida and suji would sell at about say Rs. 600/-per quintal the corresponding rate for refraction may be about Rs. 200/-per quintal.

4.3.3 The sale proceeds of such suppressed production of maida, suji etc. is difficult to detect from books of account, unless the same is introduced by way of cash credits or it finds its way in the form of investments outside the books. Proper scrutiny of Gate pass register may reveal such suppressed production.

4.4 Milling Gain

4.4.1 One of the most important aspect of milling is the milling gain. This is nothing but a moisture gain. Normally wheat has 9–13% moisture while its products are sold with moisture of 12–15%. As such in the process of milling, moisture to the extent of 3–5% gets added to the wheat. This gives the additional product weight, called milling gain.

4.4.2 Gross milling gain, though essentially, attributable to the addition of water, is a function of other factors too. These are, the structural characteristics of the wheat milled, the efficiency of the milling machinery, and the outside temperature. The last two factors remaining constant, gross milling gain depends on the variety of wheat. Water is added to wheat to facilitate efficient milling. The optimum amount of water that has to be added depends on the quality of the wheat milled. Any excess of water over the optimum amount will, besides reducing the efficiency of milling, lead to the formation of lumps in the finished products *viz.* maida, suji, and flour—a factor that tells upon the quality of the product. Another limiting factor is the Prevention of Food Adulteration Act which prescribes certain tolerance limits in respect of the moisture content of the finished products.

4.4.3 To arrive at the net milling gain/ loss, it is necessary to ascertain the loss of weight occurring on the following counts:

a. Pilferage and spillage that occur from the time wheat is purchased to the time it is brought into the mill.

b. Evaporation during the above interval.

c. Evaporation that takes place when wheat is kept stored.

d. Cleaning of wheat.

e. Evaporation during milling.

f. Spillage during milling and packing

g. Evaporation that takes place during the time when the finished products are kept stored.

Normally, milling operations result in a net milling gain, often as high as 3%. In Northern region, flour mills disclose milling gains ranging between 0.5–2.0% only.

4.5 In short the quantitative analysis of production can be summed up as under:

Particulars Weight-kg.

Gross weight of wheat purchased 101.

Net weight of wheat recorded in books of accounts after deducting weight of bags 100 Less-shortage on accounts refraction in milling process, and impurities 2.5.

Net weight of wheat actually milled (no loss of visible shortage is normally allowed, because purchases are made on gross weight basis but recorded on net weight basis 97.5.

Weight gain on account of milling gain 03 Net weight of end products like flour, suji, maida, rawa, dalia, bran 100.5.

It is difficult to verify the reasonableness of the disclosed net milling gain which may vary from say 1.0–2.5%. If the AO, having regard to the totality of the circumstances of a case, feels that the assessee has not fully disclosed the net milling gain, he should examine closely the internal evidence available in the various records, and registers maintained by the assessee. Particularly the details recorded in the Gate pass register must be correlated to the details in Railway receipts/ Lorry receipts (in terms of weight and number of bags). It may also become necessary to collect details of the goods transported by the assessee from Railway station(s) and Lorry operators and verify them with the books of account. Copies of account of major customers must be obtained and cross-verified with the assessee's books.

4.6 Manipulation in Purchase and Utilization of Gunny Bags: The millers at times record inflated figures of issues in the Gunny bags register, thereby understating the closing stock. The millers resort to this manipulation in conjunction with bogus purchases of gunny bags. Proper verification of purchase would take care of such bogus claims. As for the issues, it will be necessary to judge their reasonableness with reference to the total quantity of products milled and packed. Here correlation with the Gate pass book will also be necessary.

4.7 Verification of Sales

4.7.1 The verification of sales in these cases is no different from that in other cases. Thus verification will cover not only the quantity sold but the rate at which the products have been sold. It will be a good idea to obtain copies of account of the assessee from its major customers.

4.7.2 For selling atta, maida, suji, the dealers have to obtain the license of food grain from the Regional Food Controller Department. Since they are basically registered dealers there identity can be verified. While verifying sales, the quantity of stocks physically lifted by the customers during a period may be verified with the stocks available with the miller during the said period. Such detailed verification will help in detecting unaccounted stocks.

4.7.3 Under-invoicing of sales is a common method of concealment of income. The understatement of price may be resorted in conjunction with the misstatement of grade or quality of product sold. For example, the mill might have actually sold fine quality maida, but the invoice shows sale of medium grade. The price difference is either collected separately by miller and not brought into the books at all or introduced as fictitious cash credits.

4.7.4 Periodically the food products are in short supply and during these periods they usually command on money. The AOs should be aware of such periods of short supply and subject the sales affected during such periods to close scrutiny.

Important Issues to be Investigated:

i. Stocks.

ii. Power/ Electricity Consumption.

iii. Purchases.

iv. Yield of final product and by product.

v. Sales of final product.

vi. Sales of bye products.

vii. Sales of gunny bags (Bardana).

viii. Evidence regarding transportation of raw material, final product and bye products.

CHAPTER

6

Food Processing and Canning Industry

1. INTRODUCTION

1.1. Food processing is basically the transformation of agricultural produce or animal products from its basic raw form into food or from one form to another. Food processing enables this conversion by subjecting the agricultural produce to one or several processes right from the simple process of grinding grains for making flour to complex industrial processes for producing ready to eat foods. In the field of food processing, these processes are classified into three stages, as follows:

a. Primary food processing, by which agricultural produce is subjected to simple processes like drying, threshing, milling, grinding, removing shells/ kernels, cutting, smoking, freezing, pasteurizing, etc. This process produces food ready to use or ready to eat.

b. Secondary food processing, by which food is made out of ingredients ready to use through processes like baking, fermenting, frying, roasting and several other cooking methods.

c. Tertiary food processing is the commercial production to make ready to eat food or heat-and-serve food, which has a long shelf life and which can be preserved.

1.2 Processing of food serves twin purposes of making food stay longer and make it more attractive and palatable. Canning is also a part of food processing industry aimed at preserving food for long duration. Canning process involves placing foods in jars or similar containers and heating them to a temperature that destroys micro-organisms that would have otherwise caused food to spoil. During this heating process air is driven out of the jar and as it cools a vacuum seal is formed. This vacuum seal prevents air from getting back into the product bringing with it contaminating micro-organisms.

1.3 Techniques for processing and preservation of food have been in vogue throughout the world from early days. Scientific methods of processing and preservation, however, came to be developed only around middle of the nineteenth century. The industry gained momentum after the outbreak of first world war, when supply of large quantities of vegetables, fruits, meat etc. had to be arranged for the fighting forces of

allied countries. Further impetus to this industry was provided by the second world war.

1.4 Food processing industry is of enormous significance for India's development as it has linked economy, industry and agriculture in India, efficiently and effectively. The three pillars being together have synergized the development process and promoted the growth of the nation to a great extent. This also helped to minimize the huge wastage of perishable agricultural produce. In terms of investment in fixed capital, registered food processing sector is growing annually at an average of 15.60 per cent during six years ending 2014–15. As per the ASI 2014–15, the fixed capital in FP industry stood at Rs. 1.92 Lakh Crore. Cent per cent FDI is permitted under the automatic route in food processing industries–manufacturing sector. FDI is also allowed through approval route for trading, including through e-commerce in respect of food products manufactured and/ or produced in India.

1.5 India is the world's second largest producer of food next to China, and has the potential of being the biggest with the food and agricultural sector. The total food production in India is likely to double in near future and there is an opportunity for large investments in food and food processing technologies, skills and equipment, especially in areas of Canning, Dairy and Food Processing, Specialty Processing, Packaging, Frozen Food/ Refrigeration and Thermo Processing. Fruits & Vegetables, Fisheries, Milk & Milk Products, Meat & Poultry, Packaged/ Convenience Foods, Alcoholic Beverages & Soft Drinks and Grains are important sub-sectors of the food processing industry. A health food and health food supplement is another rapidly rising segment of this industry which is gaining vast popularity amongst the health-conscious. Apart from this, organically grown food and food products are also gaining popularity day by day.

1.6 India is one of the world's major food producers but accounts for less than 1.5 per cent of international food trade. This means that in the present era of globalization and open market, there is a vast scope for both investors and exporters in food processing industries. The industry has the highest number of plants approved by the US Food and Drug Administration (FDA) outside the USA. India's food processing sector covers fruit and vegetables; meat and poultry; milk and milk products, alcoholic beverages, fisheries, plantation, grain processing and other consumer product groups like confectionery, chocolates and cocoa products, Soya-based products, mineral water, high protein foods etc. The most promising sub-sectors includes–Softdrink bottling, Confectionery manufacture, Fishing, aquaculture, Grain-milling and grain-based products, Meat and poultry processing, Alcoholic beverages, Milk processing, Tomato paste, Fast-food, Ready-to-eat breakfast cereals, Food additives, flavors etc. Food Processing Industry is the most important segment in the world because it has major contribution in the survival of the people in the societies and Gross Domestic Product in India.

1.7 Food processing has been identified as one of the priority under "Make in India" with a view to attract investment to this sector, Ministry of Food and Processing Industries has been implementing schemes for development of infrastructure for promoting food processing industries. Mega food parks with common utilities like road, electricity, water supply, sewage facility and common processing facility like pulping, cold storage, dry storage and logistics are being promoted in areas with strong agriculture resource base.

2. STAGES OF CANNING OF FRUITS AND VEGETABLES

2.1 Sorting and Grading: After preliminary sorting, fruits and vegetables are graded. This is necessary to obtain a pack of uniform quality as regards size, colour etc. which can either be done by hand or with the help of grading machines.

2.2 Washing: Graded fruits and vegetables are washed with water in different ways, such as soaking or agitating in water, washing with cold or hot water, sprays, etc. Agitation of the washing water is effected generally by means of compressed air or a force pump or a propeller type pump.

2.3 Peeling, Coring and Pitting: The washed fruits and vegetables are then prepared for canning by peeling, coring, blanching etc. They can be peeled in a variety of ways, i.e. (i) by hand or with knife; (ii) by machine; (iii) by heat treatment; and (iv) by lye solution.

2.4 Can-Filling, Syruping, Exhausting and Sealing: The cans are washed with water or subjected to a steam-jet to remove any adhering dust or foreign matter. Automatic can-filling machines are in use in large canneries in many countries, but choice grade of fruits are generally filled by hand to prevent bruising. Hand filling ensures a properly graded pack. In India, hand filling is the most common practice.

2.5 Processing: The term 'Processing' as used in canning technology, means heating or cooking of canned foods to kill bacteria. Since fruits and vegetables vary considerably in their composition and texture, it is difficult to lay down any hard and fast rule about the temperature as well as time required for processing; However, generally three types of cookers are used for canning fruits i.e. (i) open type cookers, (ii) continuous non-agitating cookers and (iii) continuous agitating cookers.

2.6 Cooling and Testing for Defects: After processing, cans are cooled rapidly to stop the cooking process and to prevent stack-burning, especially in the cans at the centre of large stacks, where they remain for several hours. Cooling is done by (i) immersing or passing the hot-cans in tanks containing cold water; (ii) by spraying with jets of cold water; (iii) by turning cold water into the pressure cooker in the case of canned vegetables; or (iv) by exposing the cans to air in small lots, when water supply is scarce.

2.7 Labeling, Storing and Packing: The cans are then labeled by hand or by machine, and packed in strong wooden cases.

3. CANNING OF DIFFERENT FRUITS

3.1 Apples: Apples are not canned to any great extent. Canned apples, which are usually available in large packing, are generally used in pies. Apples are also used to prepare apple juices, 'murabba', shakes and a host of other products.

3.2 Bananas: Banana is one of the most important fruit crops of India. Recently, an excellent method for canning banana has been developed in combination with a number of other fruits in the form of salad.

3.3 Cherries: Cherries are grown in Kashmir Valley. There are three kinds of cherries-Sweet varieties, sub-acid varieties, and acid varieties. They are packed in barrels of brine containing calcium hydroxide, sulphur dioxide, and (occasionally) alum. They are also canned in sugar syrup solutions. Cherries are used in preparing various combinations besides, ice-creams and salads.

3.4 Grapes: Among grapes, Muscat and Thomson seedless are good canning varieties. Quality grapes have recently been developed in Maharashtra. Syrups of 20–40 Brix are used. Loss in canning is estimated to be of the order of nearly 16%. This factor needs to be critically examined while assessing cases of grade-processors which have diverse use. Grape juices are also used for preparation of various beverages and concentrates and have medicinal use also.

3.5 Lichies: Lichies are found in Uttar Pradesh, Bihar and Orissa. For canning, the fruit should be tree-ripened. Plain cans and syrup of 40 Brix with 0.5% citric acid are used for this purpose.

3.6 Mangoes: A number of varieties of mangoes are found in the country. This is grown in almost all parts of India. Since mango is an

extremely important commercial fruit of India, its canning and preservation is done on a very large scale. About 1.5 lb of unprepared fruits are required for a one lb. butter size can. Percentage of loss may vary. It is also used in preparation of pickles, chutney, concentrated juices, pies, jams squash and some health products & has tremendous export market.

3.7 Oranges: Oranges are canned to a limited extent only. Malta, 'Sathgudi' and the loose jacket oranges of Nagpur and Coorg have been found suitable for canning. Oranges are most commonly used for preparation of health tonics, different grades of squashes and juice etc.

3.8 Papaya: Papaya slices or cubes can be used for canning. About 0.5% citric acid is added to the syrup. Pears are grown in abundance in the Kulu and Kashmir valleys, and to some extent in the hilly areas of South India. The peeled and cored fruits are usually placed in 1–2% common salt solution to prevent browning.

3.9 Pineapples: Pineapples are grown mostly in Assam, Bengal, Godavari district, and the west coast of South India. Giant Kew and Queen are two important varieties. Pineapples are cut into rings, cubes or tit-bits and then canned. The trimmings and cores can be used for preparing pineapple juices or squash or slices.

4. CANNING OF VEGETABLES

4.1 Vegetables such as peas, carrots, beet roots, tomatoes, asparagus, etc. are canned in large quantities in different parts of the world.

4.2 Peas in India can be canned out of season also. For processed peas, the covering liquid should contain about 1.5 lb, of common salt, 5 lb of sugar, and about 4–5 oz. of a 2% solution of a good green colour per 10 gallons of water.

4.3 Carrots, cabbages, potatoes, cauliflower, tomatoes, etc. are canned in brine either in their natural form or in curried style using spices, fat etc. Attempt is also being made to pack indigenous vegetables like brinjal, lady fingers, green jack-fruit etc. Canned vegetables mainly cater to the requirements of armed forces, BSF, CRPF, hotels & big restaurants etc. as demand from the general public is not large for canned vegetables.

5. DEHYDRATION OF FRUITS AND VEGETABLES

5.1 A number of other processes are employed in the food processing industry, other than canning for preserving food. Understanding of these processes will help the AO to look for the areas which provide scope for manipulation of accounts.

5.2 Sun-drying is one of the oldest methods of preservation known to the mankind. With the advance in scientific knowledge, drying is now done in closed chambers by mechanical means under controlled conditions and this process is known as dehydration.

5.3 The quality of fruits and vegetables is influenced by their water content. In dehydration process, the water content of the material is reduced to a level where microorganisms may not be able to grow and spoil the food material. Dehydration reduces the weight of the material and, therefore, packing and transportation costs of dehydrated material are far less than that of the fresh material. Dehydrated material can also be compressed, thereby affecting further savings in cost of packing and transport.

5.4 Both fruits and vegetables can be dehydrated. Fruits which are usually dehydrated are mangoes, bananas, apples, apricots, grapes, peaches, pears, figs, dates, berries etc., whereas vegetables which are subjected to dehydration in this country are spinach, potatoes, peas, cauliflower, cabbage, beans, lady fingers, onions, tomatoes, carrot, beet, brinjal, bitter gourd, pumpkin, etc.; though 'peas' occupies pride of place among the dehydrated vegetables in India. Nowadays dehydrated onions are also being exported from India.

5.5 Frozen Food: This is very big segment in Food Processing industry and includes both raw/ ready to cook/ fry/ microwave. These foods comprise of vegetarian and non-vegetarian food items. The big players in this segment are "MacCain", "Kenventer", "Magson" etc.

5.6 Fruit and Vegetable Seeds: There are various edible seeds extracted from fruits and vegetables alike. These seeds are dried/ dehydrated and then sold in the market. Seeds are rich in nutrients and have many health benefits. These small but mighty kernels are high in vitamins and minerals the body needs to function at peak performance. Seeds are extremely versatile and can be incorporated easily into a variety of different recipes. Need more energy? Want a slimmer waist? There's a seed for that. Some examples are pumpkin seeds, wild rice, quinoa, flax seeds, hemp seeds, sunflower seeds, pine nuts etc.

6. PROCESSES OF DEHYDRATION

6.1.1 Sorting, Grading and Washing: The first operation in the dehydration of fruits and vegetables is sorting, grading and washing.

6.1.2 Peeling and Blanching: Fruits and vegetables are then peeled. Peeling is done by hand with knives or by abrasive peelers. Some fruits are peeled by dipping them for a short period (about 3 minutes) in a boiling solution of 1.5 to 2.5% caustic soda or lye. In some cases, fruit or vegetable is scaled for 0.5–1 minute in boiling water to loosen the peel. After peeling the material, same is thoroughly washed for removal of peel. Fruits are then cut into pieces and their inner unwanted material such as stones, seed and core removed.

6.1.3 Treatment with Sulphur Dioxide Fumes: Fruits are often treated with sulphur dioxide fumes before drying. Sulphur dioxide fumes are obtained by burning sulphur (about 2–4 kg. per ton of fruit). Fruits are placed in trays and these trays are so stacked that the fumes may react readily. The sulphur needs to be free of oil. Vegetables are often given a sulphitation treatment i.e. treated with sodium or potassium sulphite or bi-sulphite solutions. A 50:50 mixture of 0.6% sulphite and 0.6% bisulphite solutions gives very good results.

6.1.4 Drying or Dehydration: The fruits and vegetables are then loaded into trays. Trays are available in various sizes (2' × 3', 3' × 3', 3' × 6', 3' × 8') and may have slotted or solid bottoms. Trays may be made of wood or galvanized iron. However, aluminum trays are preferred because of their non-corrosive property. The trays may be lubricated with mineral oil to prevent sticking. Drying may be done in various types of drier such as tray or chamber drier, kiln drier, tower or stack drier, cabinet drier, tunnel drier etc. Drying may be done by natural circulation or by forced draft.

6.2 Changes in Weight and Dehydration Ratios: Weight of fruits and vegetables is normally reduced due to the removal of moisture in the process of dehydration. There is loss at different stages of processing such as washing, peeling, cutting, blanching of fruits and vegetables. Reduction in weight is expressed as dehydration ratio.

6.3 Packaging: Dried vegetables are compressed into blocks and packed. They are heated to 60–70 °C in the current of warm air and pressed in steel moulds of 130–200 kg/sq. cm. for a short period of 10–45 seconds. This treatment is suitable for vegetables containing high percentage of soluble solids e.g. carrots etc. However, in the case of leafy vegetables like cabbage which are rendered brittle by dehydration, conditioning in hot and humid air, to make them flaccid is necessary before applying pressure. The compressed material is packed in the containers after they have been treated in phosphate or chrome bath to prevent corrosion.

7. JAMS, JELLIES, AND MARMALADES

7.1 Among preserved fruits, jams, jellies and marmalades form an important class or products. Basically, all these products are alike, i.e. all fruits are preserved by adding sugar. Jams, jellies, and marmalades are normally prepared from cut fruits.

7.2. Jams

7.2.1 The fruits are washed thoroughly, then sorted. They may be peeled if peeling is required and then trimmed to remove undesirable ingredients. The washed fruits are pulped by cooking with water and then pulp is screened. Normally in a factory, boiled or stemmed fruits are pulped in a pulpier and then required quantities of sugar, pectin and other additives are added. Jam is prepared by boiling the whole pulp with sugar to a moderately thick consistency without retaining the shape of the fruit.

7.2.2 The proportion of sugar to fruit depends on the variety and ripeness of the fruit though the quantity addition is to be so adjusted as to ensure maximum strength to the pectin-sugar-acid gel. There has to be 30–50% invert sugar or glucose in the finished product to avoid crystallization of the cane sugar (sucrose) during storage.

7.2.3 The mixture of fruit, sugar and pectin is then concentrated by heating at about 104 °C under pressure in a steam jacketed kettle. In some cases, concentration in vacuum pan at low temperature (65–75 °C) is preferred, as this prevents loss of vitamin C. The product is then poured hot in sterilized wide mouth glass containers or cans, and pasteurized at 82 °C for 30 minutes. Jams containing higher concentration of sugar (70% or above) is kept well in most climates and pasteurization may not be necessary.

7.3 Jellies

7.3.1 Jellies are clear, transparent and viscous. Pectin, acid and sugar are the three essential substances required in the manufacture of fruit jelly. It is generally agreed that pectin form jellies when mixed with proper amounts of sugar, acid and water. All these constituents must be present in a particular ratio for making a good jelly. With more sugar, the jelly becomes stiffer. Acid causes jelly to be firmer but if the acidity is too high, jelly may become syrupy.

7.3.2 For preparation of jellies washed, peeled (if required) and trimmed fruits are cut into thin slices and then cooked in water for obtaining an extract. Grapes are cooked in their own juice and no water is required to be added. Other high juice containing fruits like berries are merely crushed and boiled. In case of fruit like guavas, sometimes a second or even a third extraction is obtained and these extracts are mixed with the first extract. In commercial practice, the juice is extracted from the cooked fruits in a pulpier or screw press.

7.3.3 The strained and clear juice is mixed with pectin, acid, sugar and other ingredients according to requirements. The mix is concentrated by boiling at 104–105 °C in open steam jacketed kettles, skimmed if necessary, and boiling is to be continued until a jelly of desired consistency is obtained.

7.4. Marmalades

7.4.1 Marmalade is a jelly in which fruit peels and pieces of fruits are also mixed. Preparation of marmalade is similar to jelly making except that pectin and acid contents of marmalades should be kept slightly higher.

7.4.2 Marmalades are usually made from citrus fruits like orange, lime, lemon and grapes. They are prepared from single or mixed fruits. Peels are cut into shreds ¾"-1" in size and about 1/32"-1/20" thick. When peels become tough they are boiled as such with sugar solution and then softened before use by boiling with water for 10–15 minutes or by boiling in 0.25% solution of soda ash or 0.1% ammonia solution. Peels could be heated in an autoclave at 115–120 °C. After softening, they are to be kept covered with water for use later on. Prepared peels are cooked

with fruit juices, sugar and other ingredients to the jellying point. Material is cooled to 65–80^0 C. After cooling, marmalade is filled into jelly glasses or jars and can be sealed airtight, or packed in cases. When it is filled in jelly glasses, it is allowed to set overnight and sealed next morning with hot paraffin wax.

8. CHUTNEYS, SAUCES AND PICKLES

8.1 Chutneys, sauces and pickles of various kinds are prepared in almost all Indian homes. They are also made on a commercial scale from fruits such as apples, peaches, plums, apricots and mangoes and vegetables like turnips, cauliflower, carrots, etc. Onion, garlic, spices, herbs etc. are added for flavour whereas vinegar, common salt and sugar are used to make them more palatable.

8.2 Chutneys: A good chutney is palatable and appetizing. Raw fruits or vegetables are generally cut into pieces or made into slices of the desired size and cooked till they are soft. Slow cooking at temperatures below the boiling point, yields better results than brisk treatment at a comparatively higher temperature. Onion and garlic are added in the beginning for mellowing their strong flavours. Spices are coarsely powdered before they are added. Sometimes a vinegar extract of spices is used instead.

8.3 Cooking Process: Sweet chutneys are usually cooked to the consistency of jam to avoid fermentation during storage. Where vinegar is used in large quantities, the amount of sugar may be kept low in view of the fact that vinegar itself partly serves as preservative.

8.4 Bottling: Only clean dry bottles, sterilized in boiling water ought to be used when they are still warm. If containers are not properly cleaned, fermentation caused by some fermentative organisms adhering to their walls is likely to spoil the chutney. It is safer to pasteurize the filled bottle (1 lb. size) for about 30 minutes at 180 ^{o}F.

9. FRUIT JUICES, SQUASHES, AND CORDIALS

9.1 Fruit juices are preserved in different forms such as pure juices, squashes, cordials, fermented juices etc. Pure fruits juice or unfermented fruit juice is natural-juice pressed out of a fruit, and remains practically unaltered in its composition during its preparation and preservation. As against this, fruit juice beverage is a fruit juice which is considerably altered in its composition before consumption. It is to be diluted before being served. Fruit juice squash consists essentially of strained juice containing moderate quantities of fruit pulp to which cane sugar is added for sweetening. Fresh juice cordial is a sparkling and clear sweetened fruit juice from which all the pulp and other suspended material stand completely eliminated, e.g. lime juice cordial.

9.2 Selection and Preparation of Fruit: The variety of fruit, its maturity, and the locality in which is grown have a marked effect on its flavour and quality. Best juices are therefore extracted from freshly picked, sound and suitable varieties. Fully ripe, mid-season fruits particularly citrus fruits yield juice superior to that of early or late picked fruits. Decayed or damaged fruits do not yield good juices. Some cull fruits, i.e. undersized, oversized, malformed or blemished, which are not readily salable as fresh fruits, can also be used for production of juices.

9.3 Extraction of Juices: The method of juice extraction will differ with the structure and composition of the fruit. Generally, juice from fresh fruits is extracted by crushing and pressing them. The juice during extraction should not be unduly exposed to air as it will spoil its colour, taste and aroma and also reduce the vitamin content. For products like tomato juice, special extraction has been recently designed for minimizing absorption of air.

9.4 Straining, Filtration and Clarifications: Fruit juices after extraction always contain varying amounts of suspended matter which

consists of broken fruit tissue and proteins in colloidal suspension. Coarse particulars of suspension in juices are either removed by straining through non-corrodible metallic screens or by sedimentation.

9.5 Preservation of Fruit Juices: Freshly extracted juices are very attractive and have good taste and aroma but deteriorate rapidly if kept for some time. To retain the natural taste and aroma of a juice it is necessary to preserve it immediately after extraction. Various methods of preservation employed are-(i) pasteurization; (ii) addition of chemicals, (iii) addition of sugar; (iv) freezing; (v) drying, and (vi) filtration. Other methods such as preservation by pressure or by gases or by electric current are not generally used at present.

10. FISH PROCESSING

10.1 Fishes are perishable and spoilage sets in soon after their landing. In the tropical climatic-conditions obtaining in major parts of India, deterioration is rapid. Before preservation, they are washed with clean water to remove the slime, blood stains, faeces and foreign matter; long fishes are gutted and thin body cavity is washed. The methods used for preservation of fish include refrigeration and freezing, drying, salting, soaking, dehydration, canning etc. The product obtained by drying, salting and smoking is known as cured fish.

10.2 Freezing of fish is comparatively a recent innovation; and this has been so far confined to shrimp and that too for foreign markets. Frozen fish in the internal market is gaining ground. Canning as a means of preservation of food, particularly fish, is ideally suited for a tropical country like India, because it does not need special storage conditions as required in the case of frozen fish.

10.3 Canned products covered by Indian Standards are prawns in oil, brine and its own juice, lactarius and tuna in oil and crab meat in brine and solid pack. Specifications relate to can exterior, vacuum in the can, volume and nature of filling medium, drained weight of contents as percentage of water capacity of the can, disintegration of the material, colour, texture and flavour of the product and freedom from extraneous material. Sodium Chloride and Citric Acid in filling brine (in the case of brine packs), proportion of water in filling medium (in oil packs), commercial sterility and maximum limits of toxic elements in all such commodities are prescribed by the appropriate authorities.

10.4 Dehydration of fish and accelerated freeze-drying process is in vogue in advanced countries as a means of preserving perishable foods of all kinds. One advantage of this process is that refrigerated conditions of storage or transport are not required and the dehydrated fish can be stored and transported at normal temperatures only.

11. MEAT PRODUCTS

11.1 Meat is largely consumed fresh in India. Meat animals include cattle, buffaloes, sheep, goats and pigs. Besides, poultry contributes to poultry meat productions, bulk of which comes from country hens (desi).

11.2 Cured, Comminuted and Canned Meat Products: Basically, the curing process involves addition of salt to retard bacterial growth and to promote preservation. Cured ham and bacon are the major processed products produced by meat industry in India. Both private and public factories are manufacturing these products. Technology for preparation of these cured products is well documented and consists of salting by stitch pumping followed by dip in pickle or dry rubbing of curing salts. Most of the regional bacon factories follow the method of stitch pumping-cum-dipping in pickle. In general, the cured products are smoked by exposing them to smoke using non-resinous hard weeds. Smoking gives the product a characteristic flavour and colour, which can be varied slightly with cure and types of smoke.

11.3 Commercial canned meat products manufactured in this country are of various types such as Indian curries and other westernized products like ham, bacon, luncheon meat, corned beef etc. Several canned meats are especially produced for infant feeding. A wide variety of meat in combination with vegetables and gravy are also produced. The time and temperature required for the destruction of bacteria depends on the nature of products, its Ph value, presence of curing salts, shape and size of can, etc. Some products are packed hot into the can and others sold. Sometimes, the meat is cooked or processed before canning to pre shrink the material and give a well-filled appearance to the contents.

11.4 Process Involved in Canning of Meat: The methods employed in the canning of different meat products are based on the same principle.

11.5 Trimming and Cutting: First operation consists of trimming and cutting of the carcasses. In the large factories, cutting portions of boneless meat is done by the use of two sets of disc cutters, each composed of anything upto 32 circular knives.

11.6 The Curing Process: Three methods of curing in use are as below:

Long Curing and Long Continued Reuse of the Pickle: The long cure is extensively used in Britain for curing brishets and tongues. After varying number of days, according to the idea of individual canner, meat is taken out and cooked. The used pickle is reinforced with salt, saltpetre and/ or nitrite, so that the percentage of different ingredients is brought up to its original level after the removal of meat.

Short Curing with Sterilization of Pickle: The short cure consists in immersing the raw-meat for a maximum of 24 hours at the temperature of Cool Cellar. The pickle is then drawn off and sterilised and requisite amount of salt is added.

Hot Cure: The raw meat is boiled in plain water for a specified time depending upon the yield required. The hot meat is then put into a hot pickle, in which it remains for a maximum period of 24 hours.

11.7 Can Filling: There are two ways of filling tin containers one is filling by hand and other is filling through a stuffing machine. Tongues, brains, sliced bacon and Vienna sausages, etc. are placed in the can by hand-filling method; and solid and bulky products, such as coned beef, are filled into the cans by means of stuffing machine.

11.8 Closing the Container: In the hold-and-cap cans, the cap has a small vent hole in the centre. The can is placed in a capping machine, where it is soldered. The cans are then placed in a vacuum machine, where the vent hole is soldered. This type of can is becoming obsolete and is being replaced by open top cans.

11.9 Sterilisation and Cooling: In this industry there is increasing use of the automatic regulation of pressure and that of sterilization method. After sterilization, cans are cooled under pressure, and then washed thoroughly using different equipment.

11.10 Dehydration of Meat: Preservation of meat is also done through dehydration. A number of factories have been setup for dehydrating meat, particularly goat meat. Meat slices are brined in 10% saline solution for three minutes, spread out on trays and dried for 8–10 hours in dehydration tunnels maintained at 63–68 ^{o}C. The slices appearing as flakes are salted, packed in tins, and sealed.

12. NAMKEEN, EXTRUDED SNACKS AND RELATED PRODUCTS

12.1 Namkeen is the Hindi word used to describe a savory flavor. Namkeen is also used as a generic term to describe savory snack foods. Presently, the market for namkeen and snacks in India is about one lakh crore rupees. It is presently the most vibrant sector of food industry. This sector has been witnessing unprecedented

growth in the recent past and still continues to expand rapidly. In the past four years, Indian namkeen market is growing at faster pace @ 22–25% as compared to Western snacks growing @12–15%. In 2016–17 year, India exported nearly $ 2.8 million worth of savoury snacks, including extruded or expanded products, registering a year over year growth of almost 22–23 per cent from the previous year. The top five importing countries if Indian namkeen were USA, followed by Australia, Thailand, Israel and UAE due to the huge Indian expat population in these countries. This segment of food industry ensures maximum value addition which is not just in monetary terms but also in giving added shelf life to the product or ensuring that there is reach from Farm to Fork. As foods category is growing in India, several food companies are in the process capturing maximum of the salty snacks market. More than 1000 items of snack and more than 300, including 'khakhra', 'mumra' (Gujarati Specialties), types of savories are sold in India with varying tastes, forms, textures, aromas, bases, sizes, shapes and fillings. The average annual per capita consumption of commercial snacks is more than 500 grams.

12.2 In the recent times, Namkeen industries have started switching on to computer controlled automated manufacturing process with no human touch involved anywhere in the processes. High end series of machineries with advanced technology imported from countries like Germany and China are being used for the same. These machineries perform all functions starting from transferring Dal/ grains from Silo to the grinding mill and from grinding mill to dough kneader, extrusion, frying, mixing proper proportion of masala and flavours, mixing various savories, weighing and packing. Touching by human hands do not happen anywhere in the entire process.

12.3 The main ingredients of 'Namkeen' are various types of grain flour and dal flour, various types of dal, peanuts and dry fruits, roasted grains, spices and condiments, edible flavours, citric acid, salt, butter, ghee, vegetable oil and like. Repeated frying in edible oil changes the physiochemical and nutrition properties of the oil and leads to the formation of TPC (Total Polar Compounds), which makes it unfit for human consumption. FSSAI has now framed laws and setup standards in respect of usage of cooking oil as also in respect of storage of used cooking oil fit for further use and disposal of unfit cooking oil.

12.4 The basic manufacturing process for Namkeen involves the following steps:

a. Dough kneading.

b. Extrusion of dough in different sizes and shapes.

c. Frying/ Roasting.

d. Mixing of savories/ flakes/ nuts/ dals, etc.

e. Weighing and packing.

12.5 Haldiram's Group is a major industry in this field. The industry strategy of this major is graphically shown as under:

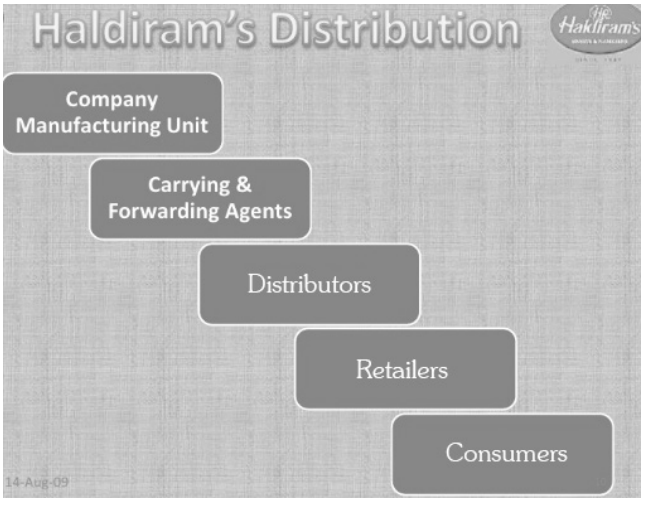


Fig. 1

13. LAWS APPLICABLE TO FOOD PROCESSING INDUSTRY

13.1 Food Safety and Standards Authority of India (FSSAI) is an autonomous body established under the Ministry of Health & Family Welfare, Government of India. The FSSAI has been

established under the Food Safety and Standards Act, 2006 which is a consolidating statute related to food safety and regulation in India. ***The Food Safety and Standards Act, 2006 (FSS Act, 2006)*** is the primary law for the regulation of food products and formulation and enforcement of food safety standards in the country. The Act is intended as an "umbrella law" for food safety by consolidating older laws, rules and regulations like *Prevention of Food Adulteration Act, 1954 Fruit Products Order, 1955, Meat Food Products Order, 1973, Vegetable Oil Products (Control) Order, 1947, Edible Oils Packaging (Regulation) Order 1988, Solvent Extracted Oil, De-Oiled Meal and Edible Flour (Control) Order, 1967, Milk and Milk Products Order, 1992.*

The Preamble to the Act states that it seeks to *"consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption"*. The Act gives statutory powers to the Food Safety and Standards Authority of India. Some of the key functions of the FSSAI include:

i. Framing of regulations to lay down food safety standards.

ii. Laying down guidelines for accreditation of laboratories for food testing.

iii. Providing scientific advice and technical support to the Central Government.

iv. Contributing to the development of international technical standards in food.

v. Collecting and collating data regarding food consumption, contamination, emerging risks etc.

vi. Disseminating information and promoting awareness about food safety in India.

13.2 Under the FSS Act, 2006 following Regulations have been notified to be followed by food processing industry which covers the various regulatory & compliance aspects of the food industry like licensing, labelling, use of additives, food standards etc.

i. Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011

ii. Food Safety and Standards (Packaging and Labelling) Regulations, 2011

iii. Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011

iv. Food Safety and Standards (Prohibition and Restrictions on Sales) Regulations, 2011

v. Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011

vi. Food Safety and Standards (Laboratory and Sample Analysis) Regulations, 2011

13.3 All Food Business Operators (FBO) in the country will be registered or licensed in accordance with the procedures laid down in FSS (Licensing and Registration of Food Businesses) Regulations, 2011. As per various rules every FBO has to be licensed/ registered with either central authorities or state authorities. These regulations have also defined Petty FBO (with turnover of less than Rs. 12 lakh) which needs to be registered with competent authorities.

13.4 The FSS Regulations lay down certain conditions for grant of license:

i. Maintain daily records of production, Raw materials utilization and sales in separate register.

ii. Maintain Records of raw materials, food additives and ingredients as well as their source of procurement shall be maintained in a register for inspection.

iii. Furnish periodic annual return 1st April to 31st March, within 31st May of each year. For manufacture of Milk and Milk Products monthly returns also to be furnished in form D.

'FORM D-1'

Annual Return

(For business other than Milk and Milk products)

(See Regulation 2.1.13)

1. Name and address of Licensee:

2. Address of the authorized premises for the manufacturing / importer of food products:

3. License No.:

4. Statement showing quantities of food products manufactured/ /imported in Tonnes

Name of the food product manufactured/ imported	Size of can / bottle/any other package (like PP) or bulk package	Quantity in MT	Sale price per Kg or per unit of packing	Value (in INR)	Quantity imported in Kg	Name of the country	Rate per Kg or per unit of packing C.I.F. /F.O.B.	Value	Remarks
1	2	3	4	5	6	7	8	9	10

iv. Ensure procurement from Licensed/ Registered source.

v. Furnish form of guarantee, i.e. Form E to certify the nature and quality of the product as under;

Form E

Form of Guarantee

(Refer Regulation 2.1.14(2))

Invoice No. _____ Place: _____

From: _____ Date: _____

To: _____

Date of Sale	Nature and Quality of article/ brand name, if any	Batch No. or Code No.	Quantity	Price
1	2	3	4	5

I/ We hereby certify that food/ foods mentioned in this invoice is/ area warranted to be of the nature and quality which it/ these purports/ purported to be.

Signature of the manufacturer/ distributor/ dealer

Name and address of
Manufacturer/ Packer
(in case of packed article)
License No. (Whenever applicable)

14. TAX INVESTIGATIONS

14.1 When any case of food processing unit is picked up for scrutiny, information submitted to the competent authority under FSS Regulations enumerated above in Form D should be collected which would help the assessing officer in checking out production details. AO is advised to study the entire manufacturing process for each product to get an idea about issues/ areas which may lead to tax evasion. It is also advised to study what are the various records maintained by the manufacturer internally to have control over the whole process. The examination of the same will give vital clues regarding line of investigation.

14.2 Investigation of Purchases

14.2.1 In the case of small-scale manufacturers, purchases of basic raw material should be subjected to verification. It has been observed that in cases where purchases are effected through commission agents, detailed accounts are not maintained. This is especially true in case of small commission agents. In case of manufacturers operating on a large scale, supply of basic raw material is through middlemen, who supply material after obtaining the same from primary producers or some commission agents. Alternatively, they enter into rate contracts for major items of purchases. In the case of seasonal items like vegetables and fruits these entities make spot purchases, which is an area of inquiry. AOs are expected to obtain a list of all significant suppliers along with their addresses from whom purchases are made. This list may also be compared with the register maintained in compliance of FSS Regulations. Most small manufacturers maintain accounts on Tally software. The same can be obtained during the inquiry which gives, both macro level and micro level view of the business of the assessee. Abnormal increase in purchases during a particular period may give clues regarding the bogus purchases. The ledgers of parties from whom purchases are made in such period may be examined. Further in cases where there are large outstanding balances may be inquired into thoroughly. Necessary inquiries with such suppliers may be conducted by issuing summons under Section 131, calling for documents in support of transactions made. The statement of suppliers may also be recorded, especially in the case of purchase of agricultural commodities. They may be asked questions to verify claim of supply by questioning them about their land holdings, crops taken, credit facilities used, bank accounts etc. At the same time enquiries through banking channel also may be conducted to ascertain if any cash is withdrawn immediately after payment or there are debit entries of similar amount immediately after credit of cheques. The bank trail will help to ascertain the flow of funds, which may again be introduced into the books of assessee as unsecured loans/ advances etc.

14.2.2 Wherever purchase of basic raw material is effected from subsidiaries, firms or companies where proprietors, partners or directors are interested, details of all such supplies should be obtained and rates compared keeping in view the available price-trends from APMC (Agricultural Produce Market Committees) to judge the reasonableness of rates and the quantum of payments made to related parties. Supplier-wise comparison of rates and rates with APMC may help ascertain whether there was any manipulation in the rates and excessive payment has made to the associates.

14.2.3 Since there can be wide variations in the ratio of the quantity of processed food to the quantity of raw material consumed depending upon the quality of raw material, it is quite easy

for the assessees engaged in this line of business to inflate the purchase of basic raw material and justify lower yield of finished product attributing it to the poor quality of raw material. If in a case yield shown is low compared to industry average, the inflation of purchases can be suspected. Bogus purchases are usually shown at a time when prevailing prices are high. It is, therefore, desirable for the assessing officer to first identify the parties from whom purchases of raw material are shown during the period when the prevailing market rate is high. Another clue for identification of bogus purchases could be that in a case where the assessees merely obtain bills for purchases from some parties and no material is in fact purchased, the payments for purchases are often not shown as made in time since such parties would obviously not insist on timely payments against the bogus sales bills issued. It is, therefore, also desirable to identify the suppliers to whom the purchase consideration is not paid within a reasonable period of time. Detailed investigation by way of direct enquiries need to be made from such suspected suppliers, preferably by maintaining an element of surprise.

14.2.4 Most large manufactures use ERP (Enterprise Resource Planning) software like SAP, Oracle to maintain books of account. ERP is used to generate periodic MIS reports pertaining to all the aspects of the production process. These reports are shared with the top management regularly so that they have control over the whole process. These reports regarding consumption and production may be examined which may give clues for detecting bogus purchases. Any abnormal production variance i.e low yield may be inquired from point of view of suppression of sales or inflation of purchases. ERP software has BOM (Bill of Material) for each product being manufactured at the unit. The same may be obtained to study the consumption and production patterns.

14.2.5 Another very important development recently is introduction of Goods and Services Tax (GST). It mandates issue of e-way bill for movement of goods. Every registered person who causes movement of goods of:

i. Consignment value exceeding 50,000 rupees.

ii. In relation to supply.

iii. For reasons out of state supply.

iv. Sales returns; stock transfer; movement for job work etc. Or.

v. Due to inward supply from unregistered person.

Shall, before commencement of movement, furnish information relating to the said goods in Part A of FORM GST EWB-01, electronically, on the common portal, a unique e-way bill number (EBN) shall be made available to the supplier/ transporter/ recipient.

In order to verify actual movement of goods claimed, E-way bills can be called for. This bill contains the details of the supplier, recipient and the transporter which can be utilised for purchase verification.

14.2.6 In addition to the basic raw material, a number of other ingredients such as sugar, chemicals, syrups, brines, preservatives etc. are required for the manufacture of various processed foods products. Assessing Officers are expected to familiarize themselves with the manufacturing processes and quality control standards to judge whether claim relating to incurring of expenditure for purchase of sugar, chemicals, preservatives etc. are within permissible limits or not. If they appear to be disproportionately high, same need to be subjected to closer scrutiny. If on

verification, expenses are found to be excessive or unverifiable, suitable disallowance should be made after proper opportunity to the assessee.

14.2.7 Another major item of purchase relates to purchase of packing material. It is also one of the costliest inputs of food industry. Packing in food industry is governed by Food Safety and Standards (Packaging and Labelling) Regulations, 2011. Bulk of expenditure is incurred on purchase of bottles, laminated rolls or cans required for packing processed food items. Though big manufacturers normally have their own factories for producing cans or bottles, cost of tin cans is found to constitute a substantial portion of the cost of production. Besides cans of various sizes, bottles and closures may also be needed where the processed food is bottled. Both tins and glass containers are used in the canning industry. However, such expenses may vary depending on whether the sale was made locally or to the outside parties. When supplies are made to Defence Services, BSF, or CRPF or goods are exported, high quality of packing standards have to be ensured due to tough standards prescribed by the concerned authorities or importers. The reasonableness of the expenses on purchase of packing material is required to be first ascertained keeping these factors in mind and if they are suspected to be on higher side further investigation into the genuineness thereof would be necessary.

14.2.8 Any food industry would be engaged in its production activity throughout the year, whereas, generally its main inputs/ raw materials from agriculture sector are seasonal. Hence, such manufacturers have a tendency to procure a big lot of such agricultural produce in season, when their prices are at rock bottom and store them in ware houses or cold storages. The agricultural produce which is perishable is generally stores in cold storages. Enquiries may be made with nearby ware-houses and cold storages to ascertain the quantity of such raw materials stocked by such manufacturers and compare the same with the books of account. If an assessee indulges in unaccounted production, it may prefer to use unaccounted stock for the same to avoid detection. In cases where stock is pledged to bank for credit facilities, monthly stock statements furnished by such manufacturers under a verification to the banks can also be examined.

14.3 Other Direct Expenses: Other significant direct expenses in this line of business include expenditure on utilities like electricity, steam, and water. The extent of expenditure may depend upon the conversion charges, which may vary from item to item. Reasonableness of these expenses need to be examined with reference to the past records of the assessee and industry averages. Consumption reports generated from ERP includes cost of material, labour, power, consumables etc which may be examined for any abnormal increase.

14.4 Loss/ Spoilage of Raw Material and Finished Products

14.4.1 The requirements in respect of freshness, ripeness or quality of raw material are clearly laid down in the relevant FSS Regulations, 2011. The basic raw material of fruits, vegetables, fish or meat are liable to spoilage if not consumed immediately. Fruit products may also lose their freshness or attractive appearance and become unsaleable after a period of time. Two primary reasons of spoilage are as under:

i. Spoilage by microorganism.

ii. Spoilage due to physical or chemical changes.

Due to the action of microorganisms, gases are generated inside, which may affect the quality of product. In other cases, tins may be swelled or bulged due to formation of gases inside the can. It is caused by decomposition due to microorganisms. Cans may also burst due to excess pressure caused by the gases inside. In such exceptional cases a manufacturer/ dealer is left with no alternative but to destroy such tins.

14.4.2 Though in some cases, claim of spoilage/ losses may at times be genuinely excessive, some manufacturers may try to use it as a facade for suppressing their profits. The AO is well advised to verify minutely; claims regarding any such spoilage of raw material or that of the finished products. The claim should also be checked with reference to the manufacturing processes involved and type of food processed besides adverse climatic conditions if any. Unusual price rise in the rates of particular food items may also have to be taken into consideration. The AO should identify the suspected cases with reference to the industry averages, past history of the cases and the claims made by other assessees in comparable cases and insist on production of necessary evidence in such suspected cases.

14.5 Byproducts and Generated Waste

14.5.1 During canning of fruits and vegetables and preparation of juices, squashes, jams, jellies, dehydrated products etc, large quantities of waste material are left over. A producer has to dispose of the peal, rags and seeds of citrus fruits, the peels and stones of mangoes, the seed of jack-fruit, core and peal of guavas and seed, skin and trimmings from tomatoes and the like. Similarly, in 'Namkeen' industry, burnt edible oil is a by-product, which is procured by soap manufacturers. Thus, in some cases, such by-products are generally sold to outsiders. Some of such by products are as follows;

i. Candied peals of citrus fruit or apple and grape.

ii. Core of guava and pear.

iii. Stones of mango.

iv. Trimmings and other waster material of pineapple.

v. Kernels of apricot and peach.

vi. Seeds of tomato.

vii. Stems of grape etc.

viii. Edible oil used for frying which is unfit for human consumption.

14.5.2 The wastes left over in the drying of vegetables like potatoes, cabbage, cauliflower, sweet potatoes, beans, etc. can be used for making cattle-food and may also be sold. The AO while examining the accounts, should make specific enquiries about the utilization of by-products and waste. Details of sale of by-products should be properly looked into to find out whether sales of by-products have been fully accounted for.

14.6 Suppression of Sales/ Turnover

14.6.1 If the yield of the finished product shown by an assessee is low, the assessee may either have inflated his purchases of inputs or may have suppressed sales of finished product. The issue relating to inflation of purchases has been discussed above. In a given case, it is possible that there is no inflation of purchases but there is suppression of sales. It is advised that sale data for each product may be called for from the assessee. *The same may be compared with the production data made available to the*

competent authorities under FSS Act, 2006 by filing of annual return in form D as per FSS Regulations, 2011. Please refer to para 13.4 above.

14.6.2 During the course of examination of a case one may sometime find excessive consumption of only some of the inputs. On examination, the purchases may be found to be genuine. In a case like this it is possible that the excess consumption of particular inputs relates to the unrecorded production and for such production certain other inputs are also purchased without recording them in the books of account. It is also possible that there are allegations of unaccounted production and sale of the products.

14.6.3 The evidence of unaccounted production and sale in the cases like these can only be obtained by way action under Section 133A or 132 of the Act. It is, therefore, desirable that if there are serious discrepancies in the ratios of consumption and production and the purchases are found to be genuine, the case may be processed from the angle of action under Section 133A or 132 of the Act.

15. PROFIT & LOSS ACCOUNT

15.1 The extent of staff and labour charges depend upon the nature and type of processes involved in the manufacture of a particular item of processed food and on the degree of mechanization. Reasonableness of the claim needs to be examined with reference to these two factors. Wherever claim appears to be unreasonable; details of salary and wages should be called for and scrutinized. Similarly, whenever there is a sharp swing in salary payments to employees or an employee or a group of employees is shown to have been paid high amounts on the ground that they had expertise in food technology and their services were needed to update the technology and modernize the plants, genuineness of such claim be examined with details of their qualifications and experience. Any abnormal salary/ consultancy payment needs to be properly looked into.

16. CONCLUSION

16.1 Some of the important issues which an Assessing Officer should bear in mind while examining a case of food industry are as under:

i. The Assessing Officer must familiarize himself with the entire production process employed by an assessee, machineries used, specification of machineries and also get in touch with the regulatory authorities under FSS Act, 2006 to ascertain the standard ratios of consumption of inputs to the final product. He should also study facts of a few comparable cases, if available.

ii. He may thereafter compare month to month consumption of raw fruits, vegetables, fish, meat and raw materials for producing final product. If there is any unusual consumption without corresponding increase in final product either in the same month or ensuing month, reasons thereof need to be analyzed.

iii. Significantly high consumption of any one or two raw material without 'on the board' higher consumption of entire spectrum of raw elements could be indicative of bogus purchases of such raw material. In a case like this, direct enquiries from the concerned suppliers and transporters are likely to provide evidence necessary for

making disallowance of bogus purchases. The enquiries from the banks about the final destination of the payments made against suspected purchases may further help the investigation.

iv. Abnormal transportation charges in a particular month or fortnight with correspondingly higher sale figure may also call for deeper examination.

v. It should also be checked whether power consumption is in various months are proportionate to the expenses of wages to labour and to the production taken in that period.

vi. Selective surveys under Section 133A could be an effective method for ascertaining whether production is suppressed and the accounts have been manipulated.

CHAPTER 7

Forest Exploitation, Timber and Plywood Industry

1. INTRODUCTION

1.1 Forests are the repositories of cultures and civilizations. Great civilizations of the world originated in the forests and then came down to the plains. In material terms, forests are the store houses of timber, grass, bamboo and canes; essential oils from plants and trees like sandal and eucalyptus, waxes, tans and dyes, gums and resins, drugs, spices, poisons and insecticides, lakh, turpentine, fuel and charcoal. The National Forest Policy 1988 acknowledges the primacy of the requirements of local communities, and advocates a sustainable management approach with maintenance of environmental stability, restoration of ecological balance, and soil and water conservation as the prime objectives of forest management. The conservation of natural heritage and genetic resources is highlighted with indicator targets of maintaining forest/ tree cover (33% of the landmass and 66% in hills). The social concerns are addressed through increasing productivity of forests to meet local needs first, and creating a massive people's movement for afforestation to reduce pressure on existing forests. Industries have been specifically advised to network with farmers for the production of industrial raw material instead of depending on subsidized supply from government forests. The economic benefits of forests have been subordinated to the principal aim of environmental stability.

1.2 Forests are evidently national wealth and a nation's richness or otherwise may be measured in terms of per capita area of forests it is endowed with. India has a forest area of only 77.47 million hectares and its per capita land forest is amongst the lowest in the world.

1.3 The process of urbanization and movement of people from rural to urban areas has put the development of forest area in the back gear. On one hand it has increased the requirement of timber for building purposes and on the other hand large forest areas have been wiped out for building towns to accommodate both man and material. The indiscriminate denudation of forest areas causes erosion of land, floods and other calamities.

1.4 In America and other European countries, the fact that forests are great purifiers of air and prevent air pollution has brought about awareness of the need of keeping up the ecological balance

by not allowing indiscriminate felling of forests. In India, there has been indiscriminate-both authorized and unauthorized-felling of trees by the forest contractors and awareness to protect the forest has dawned too late. Now, Vanmahotsava, intensive afforestation by cultivation of forests on an organized basis, has now been taken up as a priority project by the Government as well as non-government agencies. A reference may be made to the movement for saving the Himalayan forests and Silent Valley in Kerala. An emotional angle to this social problem was given by the Chipko Andolan that was a movement resorted to by villagers including women in a village called Advani in Tehri Garhwal hills in Uttarakhand (erstwhile in Uttar Pradesh) in the year 1978 when they saved some trees marked for felling by clinging to them in the face of armed police.

1.5 The subject 'Forest' has been in the concurrent list of the Indian Constitution since 1976. The Indian Forest Act 1927 is the basic legal framework governing the forests in India. The Forest (Conservation) Act 1980 (amended in 1988, 2003) empowers the Central Government (Ministry of Environment and Forests) to guide states in matters related to the diversion of forestland for non-forestry purposes, conversion of natural forests into plantations and even priorities of forest management in line with the National Forest Policy. The forest laws in India provide for declaration of forests under government management in categories like reserve and protected forests. Other categories include community, local common and private forests, aggregating into unclassed forests. The legal categories of lands indicate the intensity of regulation on the use of these lands as forests. Within the ambit of the national policy and legislation, states can promulgate legal instruments and undertake suitable measures to facilitate smooth functioning of the sector. A number of state laws have been passed to regulate forest resource use, including timber and NWFPs. Forestland in India is a tract of land that is legally proclaimed to be forest under the forest laws (mainly Indian Forest Acts 1865, 1927). India has a notified forest area of 77.47 million hectares (m ha), comprising 39.99 m ha of Reserved, 23.84 m ha of Protected and 13.64 m ha of Unclassed (unclassified) Forests. The Reserved Forest is an area notified under the Indian Forest Act or a State Forest Act enjoying a higher degree of protection (human activities are prohibited unless expressly permitted); Protected Forests are also notified under the Forest Acts but the restrictions are less stringent (human activities are permitted unless expressly prohibited). Unclassed Forests are forests that have not been included in reserved or protected forest categories. The tenurial status of such forests varies widely. The forests of the country have been grouped into 5 major categories and 16 types according to biophysical criteria. The forest area estimate based on types is given in Table 1.

Table 1

Forest Type	Area (Sq. km)	% of Total	Occurrence in States/ UTs
Tropical wet evergreen forest	45000	5.8	Arunachal Pradesh, Assam, Karnataka, Kerala, Mizoram, Manipur, Nagaland, Tamil Nadu, Sikkim, Andaman & Nicobar Islands, Goa
Tropical semi-evergreen forest	19000	2.5	Assam, Karnataka, Kerala, Maharashtra, Nagaland, Orissa, Tamil Nadu, Sikkim, Andaman & Nicobar Islands, Goa
Tropical moist deciduous forest	23300	30.3	Andhra Pradesh, Bihar, Gujarat, Assam, Karnataka, Kerala, Maharashtra, Nagaland, Mizoram, Tripura, Meghalaya, Uttar Pradesh, West Bengal, Orissa, Tamil Nadu, Sikkim, Andaman & Nicobar Islands, Goa

Table 1: (Contd.)...

...Table 1: (Contd.)

Littoral and swamp forest	7000	0.9	Andhra Pradesh, Gujarat, Maharashtra, Orissa, Tamil Nadu, West Bengal, Andaman & Nicobar Islands
Tropical dry deciduous forest	29400	38.2	Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Jammu & Kashmir, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh
Tropical thorn forest	52000	6.7	Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh
Tropical dry evergreen forest	3000	0.3	Himachal Pradesh, Jammu & Kashmir, Andhra Pradesh, Tamil Nadu
Subtropical broad leaved hill forest	3000	0.4	Assam, Meghalaya
Subtropical pine forest	37000	5.0	Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Sikkim, Uttar Pradesh, Haryana, Punjab
Subtropical dry evergreen forests	2000	0.2	Himachal Pradesh, Jammu & Kashmir
Montane wet temperate forests	16000	2.0	Arunachal Pradesh, Karnataka, Manipur, Nagaland, Sikkim, Tamil Nadu
Himalayan moist temperate forests	26000	3.4	Himachal Pradesh, Jammu & Kashmir, Uttarakhand
Himalayan dry temperate forests	2000	0.2	Himachal Pradesh, Jammu & Kashmir
Sub-alpine, moist alpine scrub forests and alpine forests	33000	4.3	Jammu & Kashmir, Himachal Pradesh and Uttarakhand

Source: Asia Pacific Forestry Sector Outlook Study II/ Working Paper No. APFSOS II/WP/2009/06/India Forestry Outlook Study, Published by the FAO.

1.6 Largest areas bear tropical dry deciduous and tropical moist deciduous types. These have been most important in terms of yield of forest products. Accordingly these habitats have been converted into commercial plantations also for industrial raw material. From the point of view of forest utilization value, the important forest regions include the central southern region with predominantly teak forests, the eastern region with Shorearobusta (sal) dominated forests and the western Himalayan region with coniferous species like pine, cedar, spruce and fir. The northern plains and foothills of the Indian Himalayan region support Shorea, Dalbergia, Terminalias Gmelina, Albizzias, etc while the northwestern arid areas bear Prosopis and Anogeissus dominated vegetation, interspersed with grassy rangelands. The northeastern region is rich in tropical and subtropical moist forests with much diversity of hardwood and softwood species. Similar composition of forests in the Western Ghats and in the Andaman and Nicobar Islands has been an important source of wood and wood products. Other specific ecologically important regions include sandalwood habitats in the southern dry belt, red sanders in Andhra Pradesh, shola forests in Nilgiris, mangroves in the Sundarbans in West Bengal, rain forests in the Andaman and Nicobar Islands and Himalayan alpines. The figures below show classification and other related data of forests in India.

2. FOREST COVER OF INDIA

Table 2: Forest Cover Classified in terms of Canopy Density Classes

Class	Description
Very Dense Forest	All land with treee canopy density of 70 per cent and abouve
Moderately Dense Forest than 70 Per cent	All lands with tree canopy density of 40 per cent and more but less
Open Forest than 40 Per cent	All lands with tree canopy density of 10 per cent and more but less
Scrub	Degraded forest lands with canopy density less than 10 per cent
Non-Forest	Lands not included in any of the above classes. (Includes water)

Table 3: Forest Cover of India

Class	Area (Sq Km)	Per cent of Geographic Area
Very Dense Forest	98,158	2.99
Moderately Dense Forest	3,08,318	9.38
Open Forest	3,01,797	9.18
Total Forest Cover *	**7,08,273**	**21.54**
Scrub	45,979	1.40
Non-Forest	25,33,217	77.06
Total Geographic Area	**32,87,469**	**100.00**
*Includes 4,921 sq km under Mangrove Cover Percentage rounded off		

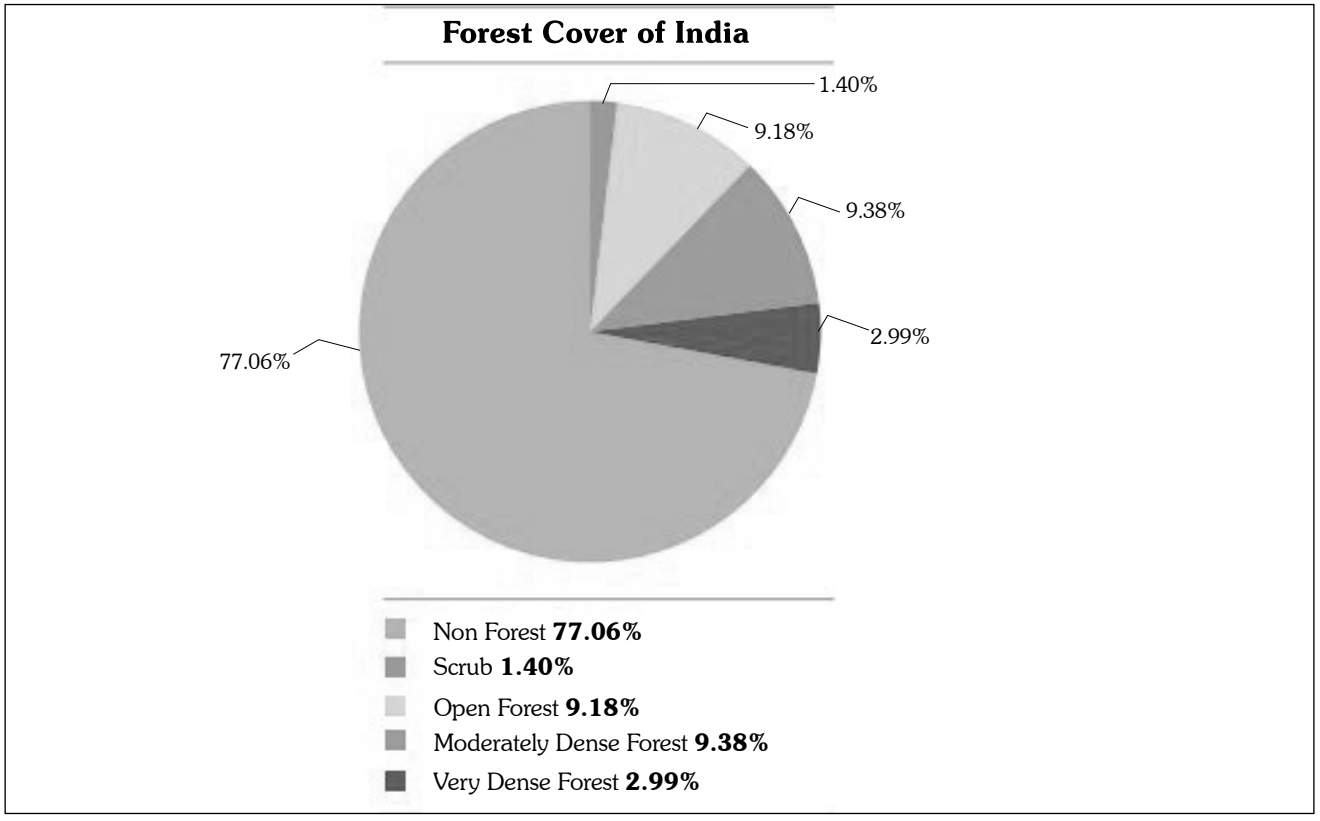
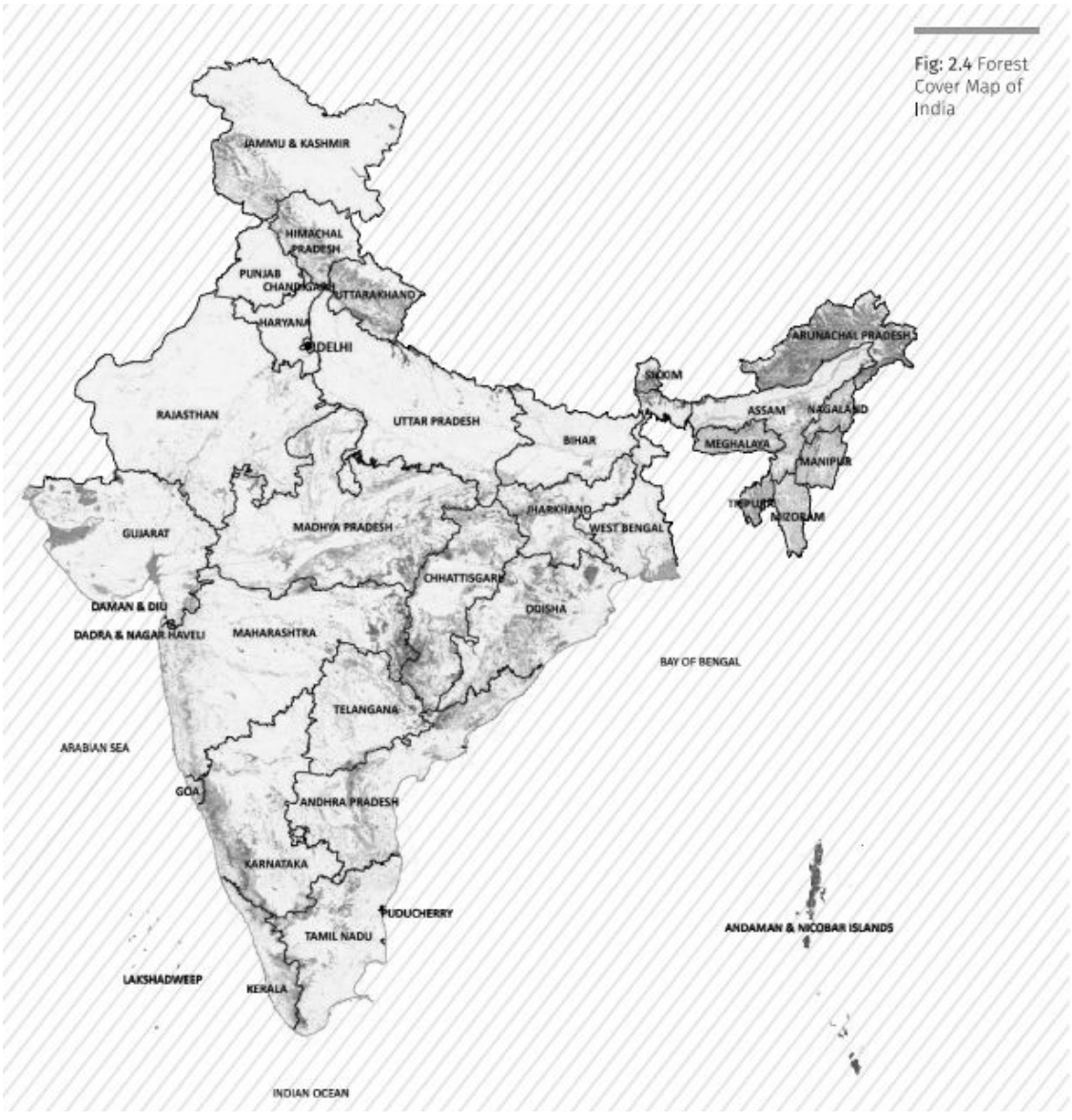


Fig. 1



Map

Fig. 2

Source: Forest Survey of India (Assessment done in 2017)

3. INDIAN TIMBER

3.1 In India, the ratio of production of round wood to firewood is almost 1:1 whereas in the world as a whole, the production of round wood is almost double of firewood. In developed countries as a whole the production of round wood is more than five times of firewood. In all underdeveloped countries taken together the position as in India prevails. This clearly indicates that on account of poor technology and other factors including understatement by contractors, excessive production of firewood is shown and the round wood production is suppressed.

3.2 While dealing with cases concerning forests and allied industries, it is necessary and helpful to have some knowledge of forests in general and trees of certain species in particular, found in different parts of the country. Technical details such as type of timber provided by a particular tree, duration of its expected life and the uses to which it is capable of being put to as also its girth, the length of its bole, susceptibility to various diseases like rotting and hollowing are relevant details that can help the assessing authorities in estimating the expected yield from a particular forest, in knowing the processes involved in its extraction and verifying the various claims put forward by the assessee and also the market conditions of that timber. For example, consumption of sawing blades will be more while exploiting teak trees than say for pines or semuls and wastage by rotting etc. will be more in semul trees whereas deodar trees are free from such diseases.

3.3 Although coniferous trees like deodar and pines constitute the major portion of the trade from exploitation of forests, yet some deciduous trees like Padauk, Teaks, Gurjan etc. are commercially of no less importance and information about the same is also necessary. Some of the important species are discussed below:

i. **Padauk:** This is known as Red wood, Chalangloda in Andaman; Vengai in Tamilnadu; and Yerravegisa in Andhra. It is the principal tree of Andamans. Very large semi-deciduous or practically evergreen tree, it reaches upto 45 m in height and 5.5 m in girth. It is slightly heavier and also stronger than teak. It is high class cabinet wood and a fine, strong constructional timber. It is especially suitable for heavy carpentry such as billiard tables, bank counters, piano cases, railway carriages, ship cabins and saloons and high class furniture. It is also used for making gun-carriages and wheels, ammunition boxes, boats and timber bridges.

ii. **Hopea:** Its local names are Bogimara, Tirupi in Kannada; Kambagonu, Ureppu in Malayalam; Kolhoni in Marathi; and Kongu, Pongu, Agil, Nirkongu in Tamil. A very large, handsome, straight evergreen tree 30–37 m high and upto 5.5 m in girth with a cylindrical clear pole of 18–24 m. It is available in the tropical wet evergreen forests of Western Ghats in Karnataka, Tamilnadu and Kerala, upto 1100 m altitude. It grows in moisture and alluvial soil. The timber is heavier and stronger than Burma teak, very hard, difficult to saw and work. Extremely durable, even in contact with ground and water and is immune to white ants. It takes a fine finish and good polish. Besides constructional timber, it is used in ship and boat building. The bark of the tree contains a high percentage of tannin (used for tanning); next to wattles, myraholans and divi-divi, it is the richest source of tanning material containing 26–28% tanning.

iii. **Gurjan:** Its local names are Charrata, Angili in Malayalam; Karungil in Tamil & Telugu; Guya in Marathi; Hollong Gurjan, Tillia Gurjan in Assamese; and Kali Gurjan or Swet Gurjan in Bangla. About ten species of gurjan are found in the country, mostly in eastern zone and Andamans. Large trees with straight cylindrical stems, they

are dominant trees in the forests they occur. They are lofty evergreen trees reaching to a height of 40–45m and girth upto 4.5 m with a long clear bole of about 21–30 m. It is a widely used and the most important plywood timber and is also suitable for tea-chest plywood. Gurjan logs are supplied to plywood industry mainly concentrated in upper Assam, Arunachal Pradesh, Nagaland, Meghalaya, Andamans and the Malabar coast and in West Bengal. It is also a standard constructional timber and can be used as a fine choice for beams. It can be used for railway sleepers after treatment. The Railway Board has sleeper treatment plants at Naharkatia in upper Assam and Olavakkot in Kerala. The timber is also commonly used in ship building. The Gurjan oil is chiefly on coleorasin that is used as an adulterant of capaiba balsam, which is an ingredient of lithographic inks and of corrosive coating compositions for iron. The oil has several other industrial applications such as preservation of timber and bamboo, caulking of boats and preparation of baking varnishes. It has also various medicinal uses. It is applied to ulcer, ring worm and cutaneous infection and is used in the treatment of diarrhoea and gonorrhea. It also acts as stimulant.

iv. **Semul:** Its local names are Simal, Tula, Pagun in Bangla; Semul, Pagun, Somir in Hindi; Burla, Sauri in Kannada; Pulai, Ilavu, Pulanarnam, Mullivala in Malayalam; Saur, Sayor, Savar, Samar in Marathi; Buroh in Oriya; Illavam, Pula, Burajal in Tamil; and Buruga in Telugu. It is also known commonly as silk cotton tree, cotton wood, red cotton tree etc. It is a lofty deciduous tree with a straight cylindrical bole. It reaches upto 40 m in height and 6 m in girth with a clear pole of 24 m. A tree of 59 m in height has been reported from Coorg. It is widely distributed almost throughout India excepting the arid regions and the lower valleys, and even in sal forests, though generally scarce in hills. It is very common in the Bhabar tracts of UP and Bihar. Assam and West Bengal have the largest supplies of semul in India. Semul timber is widely used in the match industry and in the manufacture of plywood and packing cases. It is commonly used in ceilings and also for planking. In Tamilnadu it is used for kerosene cases and in Kolar gold mines as cushion to mine-props. The floss from semul seeds is the silk cotton or Indian Kapok Commerce. It is light buoyant, elastic, resilient and water repellent. The demand for kapoks is increasing for the manufacture of life-belts and other life saving devices and also for its more recent uses like the manufacture of felted kapok and Kapok yarn. Floss is used for stuffing pillows, upholstery. Semul gum and seed oil have medicinal uses.

v. **Benteak:** Its local names in different languages are Nonu, Nao Chadhoro in Gujarati; Billinandi, Benteak in Kannada; Ventheru in Malayalam; Nana in Marathi; Vevala Venteak in Tamil; and Ventaku in Telugu. It is one of the most important trees of the west coast. It is a moderate to large size deciduous tree. In the mixed moist deciduous forests of Kanara and Malabar, the trees attain large sizes upto 30 m in height and 2.4–3 m in girth, with a 9–10 m clean cylindrical bole. It is common along and below Western Ghats from the Dangi southwards to Kerala, ascending the hill ranges of Karnataka, the Nilgiris and parts of Tamilnadu. It is very popular wood for house building, furniture, bridges etc. It is also suitable for plywood.

vi. **Brijasal:** Its local names are Bija in Bangla; Biya in Gujarati; Bija, Biji, Bijasar in Hindi; Binga, Begai bond in Kannada; Venga in Malayalam; Dharbehla, Asan in Marathi; Bjasa, Piasal in Oriya; Vengai, Pirasaran in Tamil; and Peddagi yegi in Telugu. It is also known by the common name of Kino

tree. A tall deciduous tree with spreading branches and a stout somewhat cylindrical stem it is one of the most important trees of the Indian peninsula attaining height upto 30.5 m and girth of 2.4 m at breast height. In north India, the Deccan plateau and MP it reaches 1.8 m. The tree attains its largest size in the most deciduous forests of the East Coast in Karnataka, Tamilnadu and Kerala. The timber is strong, very heavy and very hard. It is harder in transverse strength than Burma teak. It is valuable structural timber and is popular in South India for furniture and construction purposes e.g. beams, rafters and window frames.

vii. **Rose Wood:** It is locally known as Sitsal, Swetasal in Bangla; Shisam in Gujarati, Hindi and Marathi; Bite, Todagathi, bidi in Kannada; Itri, Kar-Itri in Malayalam; Sucia, Sitsal in Oriya; Itti Eruvadi in Tamil; and Irugudu, Cittegi in Telugu. It is a large deciduous or nearly evergreen tree with a cylindrical fairly straight bole and can grow upto 45 m in height and 5 m in girth. It has a large range of distribution. Commercial supplies are available in Kerala, Tamilnadu, Karnataka, Maharashtra and to a lesser extent from South Gujarat and Madhya Pradesh. It ranks amongst the finest woods for furniture and cabinet work. It is well known in America and Europe where its chief use is in the piano forte trade. It is also a decorative wood suitable for carving and ornamental ply boards and veneers. It is too expensive for general constructional work. Carefully selected and manufactured ply boards satisfy aircraft specifications. It is grown in coffee plantations as a shade-tree.

viii. **Deodar:** It is a very large coniferous, evergreen tree with dark green (rarely silvery blue) foliage and typically conical crown. It attains huge dimensions and lives to a long age. In natural forests trees with 2.4 m to 3.6 m girth predominate, though far larger trees upto 76 m height and 13.7 m in girth are found. In Manali and Kulu, trees having girth of 16.5 m have been reported. It occurs in the North-Western Himalayas, from Kashmir to Chamoli Garhwal, at elevations ranging from 1200 m to 3050 m. Total area of deodar forests in India is estimated at 2,03,263 hectares. The trees have a long life and 400–700 years old trees have been reported. Introduction of railways in India created a heavy demand for wooden sleepers and deodar along with teak and sal were initially the most wanted trees. It is recommended first choice structural wood for spans of 3 m to 6 m after seasoning. It is a second grade timber for furniture. It is also used for constructing carriage wagons and bridges etc. Saw dust or steam distillation yields an average of 2.5% of a pale yellow oil with a pleasant odour and is known as Himalayan cedar wood oil.

ix. **Chir:** This is known as Dhup in Nepali. It is a large evergreen tree-trees of 54.9 m height and breast height girth upto 3.4 m have been recorded in localities of Tons valley of Jaunsar and Tehri Garhwal. It is found in outer ranges and principal valleys of Himalayas and on the ridges of the Shivalik Hills flanking the Himalayas from about 450 m to 230 m. In India it is confined to Jammu and Kashmir, Himachal Pradesh and Uttar Pradesh. It is only second to deodar in utility. It is a popular all-round timber used expansively for house building and also by the railways as sleepers. The wood is long fibred and gives satisfactory yields of bleached pulp. Printing paper/ wrapping paper of satisfactory form and strength can be made out of chir pulp.

4. FOREST RESOURCE EXPLOITATION

4.1 Most of India's needs for forest products consist of industrial wood products, non-timber forest products and fuel wood. Other major forest products sectors are: sawn wood products, wood-based panels, wood-pulp, paper and paperboard products. Estimated consumption of industrial roundwood products in the year 2014 (latest data not available) amounted to 50.1 million cubic meters. Approximately 98.8% of supply for both India's domestic demand and exports of this commodity came from local production, and the rest from imports. There is no exact estimation of the country's consumption of fuelwood, but according to FAAAO's assessment, India consumed approximately 307.2 million cubic meters in 2014 as well. India's import of forest products amounted to $7.7 billion in 2014 which represented 1.7% of imports of all commodities. The imports of forest products have experienced a total growth of more than 515% between 2000 and 2014 as a result of shortage of domestic timber resources, governmental restrictions etc.

4.2 The exploitation of forest resources needs to be optimized for Sustainable Forest Management. This optimization would mean equilibrium between use and production of forest resources. The demand and supply of various timber and non-timber forest products largely depends upon the local requirements of people and local market conditions. There exists a huge gap between the demand and supply of forest products in India. The demand far exceeds the domestic supply. India, an ITTO producer member country, is one of the major consumers of wood in the Asia Pacific region although the country domestically produces several tropical hardwood species. The indigenous production was sufficient to meet most of the domestic timber demand till the 1980s. However, with the enactment of the Forest Conservation Act 1980 and subsequently the formulation of the National Forest Policy 1988 there has been more emphasis on conservation than timber production. Production from natural forests has shown a declining trend due to continuing forest degradation. Sampling in some of the reserved forests (RF) revealed that 82% had dense forests while the forests were degraded in the remaining 18% and had open crops where production was minimal (SFR, 2003). In protected forests (PF) the percentage of open forest was more than 60% which meant that harvesting in these areas was not feasible. Some good forest areas were also included in wildlife areas further affecting their productivity. The conditions of plantations after 1980 have also not brought the best of results mainly due to lack of proper protection, cleaning and thinning at the desired stage. Thus, production from plantations was not commensurate with the area under plantation. In order to arrest deforestation and environmental deterioration most of the state forest departments have completely or partially banned logging in natural forests over the past 20 to 25 years. Madhya Pradesh is a case in point where 16 districts/ forest divisions completely banned logging with the view that these areas would ultimately recoup. At present, logging operations in natural forests have been minimized and the resulting wood scarcity has provided an impetus for the development of farm forestry, homestead forestry and agroforestry particularly in north and south India. Currently, about 50% of the wood supply in the country comes from non-forest sources, that is, outside government forests. The rest of the industrial wood consumption is accounted for partly by imports and supply from public forests, mainly plantations. India's round wood production in 2006 was estimated to be about 240 million m^3, of which 75% is the estimated share of fuelwood and 15–20 million m^3 industrial round wood, including poles and small lumber for rural households (NFC Report 2006, p 261). Supply from natural forests (including temperate hardwood and softwood species) is about 12 million m^3 (about half coming from tropical forest areas). The estimated share of industrial round

wood for industry coming from farm forestry and other trees outside forests is 31 million m^3. Official imports of timber accounted for just over 3 million m^3 in 2006, mostly in the form of logs. Hence, there is a gap between consumption and supply of timber of about 25 million m^3 (conservatively estimated). It is assumed that a considerable part of this gap is being filled from unregistered sources, such as from home gardens and small timber logs and poles. Recycling and use of modern technologies for structural use of small wood and waste wood are also important contributors. There are varying estimates of production as well as consumption of forest products, particularly timber and processed wood. In wood production, the concept of annual allowable cut (AAC) has often been given low consideration. India's AAC, based on the net annual increment of growing stock from all sources (public and private) was only 127 million m^3 in 1994, but actual production was estimated to be 294 million m^3. According to FAO (1997), estimated removals were about 50% above net increment. Over-cutting is, however, more serious than these figures imply, considering that nearly 40% of the net annual increment in the region is in young forest plantations and that the proportion of total production from plantations is comparatively low. The failure to use less commercially desirable species and sizes, led to damage to residual trees, inadequate protection and maintenance. The state forest departments (SFDs) admit seizure of 10–20% of the illegally harvested timber. However, even the routine seizure of illegal logs in the country is guesstimated to be about 200,000 m^3. This figure needs to be multiplied by a factor of 10 to get a reasonable account of unrecorded removal. Most of the production estimates of timber products (round wood logs, sawn wood, veneer and plywood) are generally based on FAO Year Book of Forest Products 2003 and ITTO Annual Review and Assessment of World Timber Situation, 2004/05. The requirement for wood and wood products is bound to witness an unprecedented upward trend due to various economic and policy initiatives recently taken in India. All panels other than plywood barely account for 10% of the total production and the remaining 90% comprises plywood and block board. There are about 62 large and medium size plywood mills and over 2,500 SSI units that mostly operate based on plantation wood like poplar and eucalyptus grown by farmers under agroforestry systems. Technological advances allow more efficient use of raw material for better quality of products. Development of panels of bamboo composites from the mats of woven bamboo slivers is a significant development. Medium density fibreboard (MDF) has a variety of end uses and can replace tropical hardwood timbers for most of the uses. Despite the technological advances relating to efficient use of wood, reduction of wastage, diversity of raw materials and recycling, the gap between demand and supply is widening.

5. PROCEDURE FOR EXPLOITATION

5.1 Procedure for exploitation of forests including disposal of allotment, subsequent controls and permits issued at various stages and checkpoints etc. is governed by the provisions of Indian Forests Act 1927. The forests are surveyed for exploitation purposes and marked into 'lots' (H.P.) 'compartments' (J&K) 'coupes' (Assam). As to how many trees, of what size and from which forests are to be felled in each year is determined by the working plan of the forest department. This is formulated in advance for a period of 10–25 years in each Forest division.

5.2 The trees selected for exploitation are hammered and lot/ compartment are engraved thereon. Total volume of standing trees in each lot chosen for exploitation in a particular period is worked out in terms of cubic feet/ meters on those trees. These are further graded according to their quality, exploitability and commercial importance. Thus the royalty for a particular lot is fixed by the department on the basis of these data *viz.* total quantity of timber in terms

of cubic meters and its quality, number of years of the lease and total yield percentage.

5.3 The forests are disposed of generally by auction for which a notification is published in the official gazette setting out details of the forest offered for sale and date, time and place of auction. To be qualified for bid in auction, a person has to be registered with the State Government or the Forest Corporation of the State as the case may be. Open auction is conducted by keeping a reserve price which is based on the estimates made by the forest department before hand. The highest bidder is allotted the lot and is required to deposit certain amount as security. The amount of security is fixed keeping in view the confidential estimate. Higher the percentage of security to auction price, lower the rate of profit. After the allotment, a lease agreement is entered into which stipulates the details about the trees marked for felling, the time period, royalty paid or to be paid. In Assam disposal is by coupes. There is guaranteed allotment of certain percentage of forests to plywood manufacturers in the state.

5.4 Since the period of contract in most cases is more than one year (generally 4–5 years), the contractor organises his work accordingly. The labour, tools and food supplies may be for each stage, but the whole project right from the felling of the trees to the arrival of timber to the sale depot is a continued process and arrangement may be carried out at all stages simultaneously. If the forest is not approachable and there is no river/ rivulet flowing nearby, an approach road may have to be constructed. Thereafter, the contractor will be ready to start exploitation proper. The exploitation includes following stages:

i. Lopping.
ii. Felling.
iii. Sawing.
iv. Carriage.
v. Launching.
vi. Mahan.
vii. Rafting.
viii. Stacking.
ix. Marking.

5.5 Lopping consists of cutting the branches of the trees as to have a clear bole in sight and also to minimize the damage to the surrounding growth on its fall on the ground. Sometimes, this may be done after felling the trees. Felling is usually done manually. The branches lopped are generally used as fire wood by the labour, but in certain varieties like Khair, Rosewood or Padauk the lopped branches can also be disposed of as timber. The next process of sawing the logs in sleepers may be done manually or mechanically. Here the logs are converted in scants or sleepers and are ready for sale as timber in the market. This may be done by the contractor himself or through the subcontractors. The next process of carrying timber from the site of sawing to the banks of the river or the stream as the case may be is called launching. In the first instance the timber is brought to the river bank manually as head load and thereafter it can be transported by one or combination of the three modes-rope way, dry slide or wet slide. The timber which is taken out from the forest and slid down the slope is collected at the base of the hill at the river side for launching which is also known as 'Ghal' i.e. putting out the timber on to the river for its further journey down.

5.6 Ghal also includes the stocking of the timber flowing down the river at a time. This is usually done through subcontractors and there is also scope for pilferage. The labour is organized into sweeping parties and advance parties to clear the timber that gets stuck up either in the banks or in the mid stream due to stones or boulders on to the sides. The whole process of launching and reaching the Ghal upto the catching point is known as 'Mahan' and expenses incurred are called mahan expenses.

5.7 From the catching point, the next point of transporting the timber through river in plains is known as rafting. Here 200–300 pieces are tied into rafts and floated down the river. They are collected at the sale depot, which is usually established at the bank of the water channel close to a rail/ road head. Here the raft is untied and the timber is stacked in sizes, species and quality grading. This is called landing and stacking.

5.8 At this stage the forest lessee makes a payment called boom fee, to the forest department. Payment will also be made to the sub-contractor for labour, felling, sawing and mahan who tender their final bills and their accounts are settled here. The transporter is also paid for the carriage and after the timber has reached the sale depot, the exploitation process is complete. In case of the forests situated in plains, all these processes are valid except for the river transportation.

6. ORGANISATIONAL SETUP

At each successive stage in his operations, from the felling stage downward upto the sale depot, the forest contractor establishes sub-depots at certain points. These sub-depots act as advance operational command-posts where the employees of the contractor are stationed for controlling and supervising various processes of exploitation of forests. These sub-depots act as accounting points for production, labour as well as for expenses. Money and other supplies which cannot be obtained at the sub-depots or at the forest sites are sent from the Head Office to the depot from where they are distributed to different sub-depots. Thus the organisational setup in this business would consist of sub-depots at forest sites and launching site etc. supervised by a main depot called the sale depot-all activities finally being controlled and recorded in the head office of the contractor. However, the contractor may modify or adopt a variation of the processes detailed above to suit the needs and the requirements of the forest depending upon the situation and other factors and therefore, it would be advisable to ascertain from the contractor himself, the processes employed by him in the exploitation of a particular lot and then proceed to examine the accounts.

7. TAX INVESTIGATIONS

7.1 The first step in dealing with such cases is to identify the exact geographical location of the forests. The AO should for this purpose prepare a map marking the situation of the forest, approach routes, roads, rail and rivers and means of transport and communications available, position of the godowns, saw mills, if any, utilised by the contractor, collection points, launching site, location of sub-depots and sale depots and headquarters of the contractor, towns and banking facilities available. Similarly position of forest barriers, octroi posts and other check posts should also be shown. Thus the whole vista of the operations will be graphically present before the officer and it would be possible for him to relate movement of man, machinery, material and money to time, distance and motion. The well-known golden rule for picking up clues is to look for the abnormal and unusual and to raise an enquiry and suspicious eye at the deviation. The map prepared on the lines mentioned above should help the officer in spotting such deviations and incongruities.

7.2 Another step preparatory to the examination of accounts is to obtain the original lease deed drawn between the lessee and the forest department. The study of this lease deed should be made with respect to the Clauses dealing with the location of the lot, basis of fixation of royalty, total number of trees allotted, the timber involved in terms of cubic meters and total number of trees marked for felling. This agreement would also show how to determine the various phases of the operations and as to how those operations are to be carried out in a particular lot, and also the dates by which the timber is required to be exported etc. This would also lay down the

security deposit required to be made, mode of payment of royalty and the dates on which the instalments of royalty are required to be paid to the forest department. Royalty is sometimes paid in instalments and sometimes in lump-sum. These Clauses should be related to actual adjustment of royalty after the compartment has been exploited, stock position from time to time in terms of scants, logs and standing trees. These details form the basis of valuation of stock at the end of the year.

7.3 Since most of the work of exploitation upto the stage of collection at the sale depot is done by manual labour and more than 50% of the work is done in forests, it is the forest books which are the basic books of account and these books, along with the vouchers relating thereto, need thorough examination.

7.4 Besides the licensing fee and royalty payable to the forest department, forest contractor would, in the process of exploitation incur expenses under the following heads.

a. Felling commission.

b. Sawing commission.

c. Log cutting commission.

d. Log carriage commission.

e. Machine sawing commission.

f. Pathru (dry slide) expenses.

g. Pakki nali (wet slide) expenses.

h. Rope way carriage expenses.

i. Carriage to godam expenses.

j. Mahan expenses for launching and rafting.

k. Godown loss.

l. Khudan-engraving of property mark and hammering expenses.

m. Inami labour expenses.

n. Salaries.

o. Travelling expenses.

p. Medical aid.

q. Boom fee.

7.5 Payment of the royalty is the first and most important item for investigation. Contractors are required to deposit large sums of money as security money on the fall of the hammer i.e. immediately at the end of the auction. All subsequent payments towards royalty are also of substantial amounts. Very often contractors do not have sufficient cash balance in their cash book on the relevant date. The point to remember is that the actual date on which the money was handed over to the forest department and not the date on which such payment has been recorded in the books of account, is the material point of time at which the availability of cash with forest lessee and sources thereof should be verified. Since the branch offices, sub-depots and the subcontractors have running accounts with the head office, it is easy for the assessee to manipulate such cash balances. Therefore, it is necessary not only to go into the source of such payments but also the source of the sources has to be traced till the ultimate source and its relation is established. For detection of concealment, two lines of investigation can be followed, firstly, to go by accretions to their wealth from year to year; and secondly, to enquire into sources of major payments.

7.6 The term commission is used for some expenses because mostly the work is done through subcontractors to whom payments are made. The labours engaged are generally poor, illiterate persons, coming from hill areas or away from contract site, and are easily exploited. Hence, it is necessary that lease deeds in respect of the subcontractors are obtained and verified. Besides the terms of the contract, their genuineness itself should be cross checked with the actual muster rolls and other vouchers. One of the methods usually adopted is that rates of commission are inflated to cover up the commission paid on undisclosed stock. Hence, as suggested earlier total expenses must be

related to the total timber that should have been extracted by the contractor from the forest.

8. BOOKS MAINTAINED BY FOREST CONTRACTORS

8.1 Apart from the usual cash books, ledgers, journals etc., forest contractors maintain following records, which should be thoroughly examined:

a. At forest site or sub depots.

b. Muster rolls/ acquaintance rolls or pay book.

c. Felling register.

d. Sawing register.

e. Tally book.

f. Launching register.

g. Carriage register showing the logs or scantlings transported by trucks.

h. Register of passes.

i. Copies of statement of account received from sub-contact ors in respect of output.

j. Copies of statement of account submitted to the depot or head office showing cash receipts from head office and distribution thereof.

k. Sub contractors ledger.

l. Register of timber passed at the forest check post.

8.2 Books maintained at depots:

a. Bill books.

b. Stock register.

c. Railway receipt book.

d. Copies of statement of stock received through trucks by road or by rafts with reference to which entries can be made in regular books.

e. Statement of money received in cash or other forms and its disposal.

8.3 Books maintained at head office:

a. Statement of account received from depots and sub depots.

b. Periodical intimations from sub depots or the forest site regarding the progress of exploitation.

9. EXAMINATION OF ACCOUNTS

9.1 Three basic items on which the profits of the forest contractors depend are-the quality of timber extracted, the value of the sales effected and the expenses of exploitation. Sales of timber are usually effected at the depot itself, though sometimes the timber may be sent to Head Office for sales. The main points requiring scrutiny are:

a. Whether all the timber extracted has been accounted for by the contractor in his books-either as sales or as part of the closing stock.

b. Whether the sales shown are subject to verification and have not been understated.

c. Whether the expenses on exploitation can be verified and/ or there is a reason to suspect inflation by fictitious and bogus claims.

9.2 Verification of Quantitative Details: Verification of the quantitative details is absolutely necessary at different stages of exploitation. The expenses should also be classified according to the different species of timber, after which the quantitative details should be reconciled. Following process will be helpful for this purpose:

i. Lease agreement between the contractor and the forest department should be scrutinized. The agreement will show the number of trees and quantity of timber in terms of cubic meters. Depending

upon the size of logs, scants or sleepers produced their total number which should have been obtained from a particular lot can be determined. Any variations can be checked back with reference to the age of the forest, species of the trees, their height and girth and any claims on account of excessive wastage due to rotting must be verified from this data. The certificates issued by the forest authorities can also be cross checked with the help of this data. Total stock shown in the trading account should then be tallied with the estimated production and explanations obtained from the assessee for any variations. There is also widespread practice of felling of unauthorized trees. This can be checked by proper verification of exploitation expenses because the assessee will charge these expenses to his accounts and such collusive sales must have been entered at any of the sub depots or depot. These are also sometimes shown as distress sales at unit price much below the normal rate.

ii. Daily register maintained at forest sites for recording the quantitative details of the felling, sawing and launching.

iii. Scrutiny of personal accounts of the subcontractors engaged for the exploitation processes at various stages, would furnish the same information. Their personal accounts would be credited with the value of work done by the labour employed by them and since it is done on the basis of piecework, the total quantity of timber felled, sawn, carried and launched etc. could be known.

iv. Various permits issued by the forest department like 'ravannas' or launching permits, would also contain the details of total timber taken out by the contractor from the jungle from time to time. According to rules no timber can be taken out from forest site unless its quantity has been checked and verified at the check post established by the forest department and permits issued by them allowing the timber to pass through the barrier. Apart from bringing on record the details of timber taken out, the information is also valuable for ascertaining the genuineness of the claims for work done by the subcontractors at various stages of the exploitation. Muharirs of the forest department issue these permits that are documents of primary entry and much would depend upon their correctness. On scrutiny in one case it was found that the muharir has prepared permits on the days when he was not on duty at all.

v. The assessing authority may also call for information directly from the forest department. On request, the forest department would certify the quantity of timber exported from a particular forest lot by the forest contractor as also the penalties, if any, imposed for felling down of the trees in excess of allotment and damage caused to the other standing trees, as also concessions, if any, allowed in respect of the royalties payable. The forest department can also certify the royalty paid by the contractor.

vi. Where timber extracted from the forest is transported to the sale depot by river, the contractor prepares launching lists that are to be verified against the record prepared at the time when the same timber in the shape of scants was taken out of the forest, the number of scants and volume thereof in cubic meters declared to the forest department. A check is carried out at the launching site also by the forest department before a launching permit is issued by them. The permit records the number of logs, scants or sleepers and their volume in cubic meters that the contractor is allowed to put out in the river, as also the launching date and details regarding payment and adjustment of royalty.

vii. Muster rolls and acquaintance rolls record the number of labourers on a particular job which may further be cross verified with the total consumption of rations under the head 'godown loss.' This figure related to the number of man days put in would give an indication of the trees felled and logs produced.

viii. Timber, if carried by the truck at any stage, the number of trips made by these trucks and loading and unloading expenses paid thereon can help in cross verification of the total stock of timber exported by the contractor.

ix. Engraving and hammering charges are recorded in Khudan and stacking register and are paid on the basis of per unit of timber and total number of units thus declared have to be accounted for.

9.3 Claims of Loss and Wastage: It is usual for the contractor to claim shortages in transit and produce the stacking register in support of the claim. Generally, after removal from site, shortages can occur only in case of timber that is floated down the river when some of it may be carried away by the current out of reach or get stolen on the way. Such loss should be normally within 5%. The figure may be higher if there are floods in the river and timber is washed away irretrievably. However, there should be no loss when timber is brought by land routes to the depot. Mere certificate of the taxpayer is not enough to verify the shortage. A careful study of the launching or the registers maintained at launching office and the collection point will be helpful in this regard. Spot enquiry by the Inspector can bring to light discrepancies in this regard.

9.4 Inflation of Expenses: The contractor may make claims for expenses not incurred at all or may inflate the expenses under various heads in which they are incurred. The expenses incurred by the contractors have to be proved by them completely. The AO will be justified to disallow the expenses, especially when they are considered excessive, unless they are proved in regard to their genuineness by the contractor. The AO should call for the agreements entered into by the contractor with the sub-contractors before examining the genuineness and correctness of expenses. However, nonexistence of the agreement by itself does not justify the rejection of accounts. The evidence should be called for to verify:

a. Whether a particular sub-contractor was actually engaged.

b. The rate at which the work has been credited to the account of the sub-contractor, has been correctly shown and that payments have been made according to it.

c. A comparison of the rates in the agreement with similar cases might reveal inflated contract rates. Since the labour is illiterate, it is possible to get receipt for any amount.

9.5 The normal practice of the subcontractors is to tender periodic statement of account to their principals, the forest contractor, and it is only on the basis of these statements that entries in their accounts are made in the ledger by the latter. The contractors preserve these statements in their own interest. The AO should check these on random basis.

9.6 Purchase of Timber at Depot: Often the contractors have to purchase timber at depot locally to meet their commitments of making supplies. Some of the unverifiable purchases may be shown at inflated rates. To verify the genuineness of such purchases the AO may:

a. Compare rates with the purchases made by the forest contractors of similar timber from known parties near about the date of the transaction under investigation;

b. Compare the rate with the cost of conversion to the contractor himself of similar timber;

c. Look into the rate at which sales have been made of this particular timber;

d. Ensure that the purchased timber is not the contractor's own timber surreptitiously kept back from his stock account at the forest site or depot.

9.7 Benami Contracts: One of the usual devices adopted by forest contractors is either to sell off a contract obtained by them on commission or to take on auction a forest coupe or forest lot in the name of a benamidar who are usually the contractor's own employees or near relatives. The case of a new contractor should therefore be particularly scrutinised to see whether the alleged contractor has used his own funds from known sources or is a benamidar of another contractor.

9.8 Scrutiny of Special Expenses Accounts

9.8.1 Godown Loss: Since the forests are generally situated in difficult areas and the labour are required to be kept satisfied, they are supplied ration on subsidized rates. Rations and other requirements are purchased in towns or at one of the depots belonging to the contractor and carried into the forest site. Contracts are given for making these supplies to make available to the forest labour. The difference between the cost of procurement of these rations at forest site and the price charged from the labour is called 'beshi' or godown loss and is charged to the profit and loss account by the contractor. Proper verification of chits and indents issued by the labour contractor to 'munim' in this respect should be made and total expenses cross checked in relation to the number of labour employed as per muster roll or acquaintance rolls. These expenses are usually inflated by showing either bogus names or by showing inflated supplies per head. As a rough and ready check it may be mentioned that a man working in difficult conditions consumes about 600 grams of ration on an average per day.

9.8.2 Cost of Roads and Huts: The expenditure on this account is now considered allowable as revenue expenditure. However, the expenditure under this head requires detailed scrutiny. Many a times roads are constructed by the forest department but bogus expenditure on this account is claimed by the contractor. It is therefore necessary that enquiry on this account should be addressed to the forest department.

9.8.3 Sawing Charges: The trees are usually logged for being sawn into Broad Gauge sleepers, 10 inch wide and 5 inch thick and in lengths of 9, 10 or 11 feet. Other sizes are made out of the remnants of smaller pieces from which whole sizes cannot be converted. Sawing output and loss in conversion of trees by sawing is again dependent upon various factors. In this process what is to be looked into is the disposal of rejection and its proper accounting. Claim for other expenses like total consumption of sawing blades or rope ways and expenses on wet/ dry slides should be verified from actual vouchers and in terms of the agreements with the contractors.

9.8.4 Carriage Charges: In many cases the contractors have their vehicles and other modes of transport which are used for carriage of timber and for other purposes. Their running, repair and maintenance charges must be checked thoroughly. The log books maintained in respect of each vehicle and details of trips made as recorded therein must be cross-verified with the records available at various check points, octroi posts and location of the sub depots of the assessee. Particular attention will have to be given to the maintenance charges e.g. expenses on tyres etc. The vehicles may belong to the relative of the contractor or a benamidar himself or a sister concern and the expenses may be inflated.

9.8.5 Bad debts in respect of advances to subcontractors for supply of labour, rations and for performing other jobs require detailed scrutiny. The labourers are migratory and seasonal and many times they disappear without

notice and their contact address may not be available. Though this may be a fact in itself but the claims made in this regard require thorough check before being accepted.

9.9 Fictitious Claims and Bogus Payments: Normally the forest contractors finish the extraction work by the date stipulated in the agreement entered into with the forest department because any delay would make the contractor liable for the penalty. The subcontractors require constant and immediate payments for the work done so as to enable disbursement of wages to the labour working under them. The subcontractors insist the early settlement of their accounts as soon as the work is finished so that they may make final payment to the labour and get their own share of the earnings and move to the other work. Therefore where a contractor claims that payments have been settled much after the contract period was over, should be looked with suspicion. Unless there are verifiable and extraordinary circumstances, the cases of delayed payments may not be accepted without thorough scrutiny.

10. FOREST EXPLOITATION BY FOREST OWNER

10.1 Where the forest is exploited by the owner himself without engaging sub-contractor, the chances of inflation of expenses are higher and therefore, the expenses should be examined more thoroughly and critically.

10.2 Often the laws are bypassed by ingenious methods. For example in many states, major parts of forests are declared tribal areas and cutting of trees require permission of State authorities. The owner of land before cutting trees should obtain permission of authorities. In a case, tribal land was unofficially bought by non-tribal businessmen whereas on paper, the land was still in the name of original owner. All permissions were obtained by these businessmen in the name of owner and trees were cut on a large scale. The scam was unearthed and central agencies came into action and involvement of officers of level of divisional commissioner was found. Then the IT department initiated action and large demand was raised. The officers posted in such areas should be aware of local activities and incidents reported in media.

11. VALUATION OF STOCK

Valuation of the timber and the valuation of closing stock are the next points to be looked into by the assessing officer. It should be ensured that all the expenses incurred by the assessee in the forest for extraction of timber from the forest site upto the launching site should be included in the Manufacturing and Trading Account and therefore these expenses should be taken into consideration to ascertain whether the closing stock has been valued correctly. Besides, it should also be seen that the same method of valuation is used consistently. Difficulty can also arise while considering the question whether the standing trees should be included in the closing stock and, if so, method of their valuation. The manner of treatment may depend upon the process of exploitation adopted by the assessee, the contractor may work a lot by stage or in parts and method of accounting may vary, but it should have been consistently followed.

12. CASH BOOK

12.1 The contractor's requirement of cash from time to time and the manner in which he has met these requirements also need a thorough scrutiny. While examining the cash book, it should be kept in mind that it is at the launching and at the collection site that the contractor would need large amounts of cash because it is here that he has to make final payments towards royalty and to the subcontractors. Therefore, he would naturally start his efforts to raise cash and try to introduce receipts of large amounts of cash in his cash book. Each and every entry therefore should be properly scrutinized. The assessee may show encashment of savings certificate

or fixed deposit receipts or even produce pass book of a bank account in support of the cash introduced. This should not be accepted on the face value. In some cases it was found that no such account existed with the particular post office. For verifying the cash credits, the AO should not be satisfied merely by affidavits of alleged depositors, but he should go into the form, time and place of such a receipt, mode of its carriage to the point at which it was disposed of and also the creditor's capacity to advance such an amount.

12.2 The claim of bogus, fictitious and inflated expenses leads to the release of cash outside the books. The cash equivalent to the bogus and inflated expenses would not be kept idle and the assessee would utilize them in making payments for expenses particularly on a day on which these expenses have been incurred but there is not enough cash in the books. Hence the cash books, especially those kept at the depot and sub-depots at forest sites should be minutely scrutinized with reference to the actual dates on which such verifiable expenses as royalty, launching fees, etc. are paid. Remittance of cash between the head office, depot and sub-depots should also be scrutinized with the same end in view keeping in mind the distance between them and the time that would elapse while money sent from head office would reach the depot and then to the sub-depots at forest sites. It may happen that the receipt of the cash may be shown on the books when even by the fastest mode of transport it could not reach there on the specified date.

12.3 Such money may be introduced as cash deposits without being recorded in ledgers, and withdrawn later in the same manner. It may also be used in making advance payments to the subcontractors engaged for working in the next season, the advance payment being made to them at the forest site on a date earlier than on which this payment is recorded subsequently in the cash book.

13. HEAD OFFICE ACCOUNT

13.1 While examining the accounts of the head office of the forest contractor, particular attention should be paid to the following points:

Bank Account: The withdrawals of cash from bank and cash deposits representing remittance of sale proceeds from the depots have to be verified with reference to the inter-branch accounts.

Personal Withdrawals: Money released outside being the amount of inflated and bogus expenses is utilised for the purpose of meeting personal expenses of the proprietors and the partners. The adequacy of the withdrawals has to be thoroughly investigated.

Balance Sheet: As has been already discussed, normally the accounts of the subcontractors are settled well before the completion of the contract period. Therefore the Balance Sheet should not contain creditors for the payments due to subcontractors. There may be some debtors for the money advanced for the next season or the advances not adjusted against the payments for the work done. Therefore, where such accounts appear in the Balance Sheet, they should be thoroughly investigated.

14. MARKETING OF TIMBER

14.1 Sale of timber may be done in any of the following three ways:

a. Direct by the contractor.

b. Timber merchants who purchase timber from the contractor in the forest itself.

c. Through commission agents.

14.2 Where sales are made to the government departments like railways or electricity boards, the timber is dispatched from the sale depot by the contractor himself. However, major portion is sold through commission agents, who, in turn indulge in forward trading. The commission agents enter into contracts with the contractors

as regards rate and quantum in advance and also pay advance against future payments.

14.3 Where sales are made either at the depot or at the head office to the established traders either on whole sale or on commission basis, such transactions are supported by bills which give details of the quantity as well as quality of timber sold. To ensure that all the bills have been entered into the books, it will be necessary to test check the sales and verify them in the usual manner. Many times the sales are manipulated and the contractor may adopt any one or more of the following ways for doing so:

a. By showing large amount of cash sales. Sales may be made to the unidentifiable parties to manipulate the quantity as well as the quality of timber sold. Usually sales of the quality timber is sold in advance to the government departments or to the established traders. Local sales should therefore be confined only in regard to the sales of inferior quality. Where sales are shown to the local parties, they should be compared with other sales to find out understatement therein.

b. Sales to 'benamidars'-Sales made to 'benamidars' of the contractor are also understated so as to reduce the profits of the assessee. To detect such sales is not easy, but can be traced by checking how the contract of sale was entered into between the parties and how and where the goods were delivered, how the payment was received, whether any interest is charged on the outstanding balance.

c. Understatement of quality of timber sold-This can be detected by verifying the quantitative details of the timber kept by the contractor. Usually separate accounts are kept for different quality of timber. An examination of these records with reference to the sales account would help in bringing to light transactions of this type.

d. Claim may be made for shortage in storage and the timber to that extent may be sold outside the books. Therefore, excessive claims of shortage should not be accepted unless fully substantiated.

e. When logs are carried down to the Head Office in the town, the output of scantlings, obtained after sawing may be understated. In such cases it is necessary to tally the quantity of logs sawn and the output of scantlings. Very often such output may have to be calculated with reference to total sales plus closing stock less opening stock. Such an output tally in respect of different species of timber logs such as teak, deodar etc. can prove very effective in detecting suppression of stock.

f. Where forests of spontaneous growth are auctioned for clearing, there is likelihood of under-statement of timber output since the forest check is not as rigorous as in the case of forests auctioned with marked trees. In such cases the output-expense ratio should be especially examined and a cross check of customer's accounts for selected cash sales also made.

g. Obligation of the seller of tax collection at source: According to Section 206C of the Income-tax Act 1961, every seller of forest produce is under legal obligation to collect tax from the buyer of such products at the time of such sale. The rates of TCS are as under:

Table 4

S. No.	Nature of Goods	Percentage
1	Tendu leaves	Five per cent
2	Timber obtained under a forest lease	Two and one-half per cent
3	Timber obtained by any mode other than under a forest lease	Two and one-half per cent
4	Any other forest produce not being timber or Tendu leaves	Two and one-half per cent

h. No collection of tax at source is to be made in case of a buyer, who is resident in India if such buyer furnishes to the person responsible for collecting tax, a declaration in writing in duplicate in the prescribed Form 27C of Income-tax rules(under rule 37C) and verified in prescribed manner to the effect that the goods referred to in the above table are to be utilised for the purposes of manufacturing, processing or producing articles or things or for the purposes of generation of power and not for trading purposes. The person responsible for collecting tax at source under Section 206C has to compulsorily deliver or caused to be delivered to the Principal CCIT or Principal CIT one copy of the Form 27C on or before the seventh day of month next following the month in which the declaration is furnished to him. Thus a manufacturer, producer or a processor of articles or things or power is exempt from the TCS obligation if he has furnished the declaration in Form 27C. This exemption is however not available for a trader of forest produces. It is seen that the declarations received by the seller are not delivered to the department and therefore the verification of the nature of activity or utilization of forest produces by the buyer remain unverified. It is seen that many a times the unscrupulous traders also furnish Form 27C to the sellers and thereby violating the requirement of TCS. This malpractice results in non collection of TCS and also non verification of end utilization of the forest produce by the buyer. The Assessing Officer should bear this practice in mind while doing the assessment of persons dealing in forest produce.

15. IMPORTANT CASE LAWS

15.1 Certain court decisions, relevant to timber and wood trade, are given below with the ratio of the cases.

15.2 Interest paid on delayed payment of royalty-Royalty is required to be paid generally in instalments on specified dates. When the contractor is not in a position to make the payments in time he is required to pay interest in addition to the amount of the royalty itself. It was earlier held that this interest payment is in the nature of penalty and therefore not an allowable expenditure under Section 37 of the Act. However, it has now been accepted by the Department that the nature of interest paid on delayed payment of royalty is incidental to business and is not for infraction of law and therefore, the admissibility of claim will have to be decided in each individual case keeping in view the terms of the lease agreement and other relevant facts of the case.

15.3 Deductions available to a manufacturing unit-Income-tax Act allows deduction to eligible industries and units engaged in manufacture. The contractors engaged in the exploitation of forest have been claiming that their business is manufacturing of logs and sleepers. Therefore they are entitled to deduction under Section 80 HH. This is also on the basis because most of the forest business is in backward areas. The Courts are not unanimous. Allahabad High Court accepted the claim of the taxpayers but the view of the Punjab and Haryana High Court is to the contrary. (*Pyare Lal Khushwant Rai vs. State of Punjab)*.

15.4 The assessee, an authorised contractor engaged in the purchase of forest lots removed from the forest, chopped and sold the same as firewood. The Sales Tax department treated the taxpayer as a manufacturer and charged sales tax accordingly. The taxpayer claimed that he was assessable only as a dealer. The Court decided the case in favour of the taxpayer and relied on the decision of the *Supreme Court in Union of India vs. Delhi Cloth and General Mills Co. Ltd* (1963) S.C. 791, (1963) and *Commissioner of Sales Tax UP vs. Harbilas Rai and Sons* (1968) 21 S.T.C. 17 (S.C.).

15.5 "Manufacture" implied a change, but every change is not manufacture and yet every change of an article is the result of treatment, labour and manipulation. But a new and different article must emerge having a distinct name, character or use. The Court also observed that cutting the logs in small and big pieces would not make any difference in the nature of business. A customer may purchase logs and may himself get them cut in the pieces of shapes and sizes of his requirement or he may purchase the pieces cut by the contractor. In both the cases the nature of business remains the same. It does not make a difference if the trees are sold as timber or fuel without any work of art. A Division Bench of Madhya Pradesh High Court in *Mohan Lal Vishram vs. Commissioner of Sales Tax, Madhya Pradesh* (1969) 24 STC 101 observed that by felling standing timber trees, cutting them and converting some of them into ballies, the assessee did not alter their character as timber.

15.6 Tax exemption to State Forest Corporations-In almost all the states, the work relating to exploitation of the forests has been given to State Forest Development Corporations. These corporations are different from the forest department and are therefore taxable as Government Undertakings. Some of these corporations have claimed that their income is exempt from tax under Section 10(20) as well as Section 11(1) of the Act. Uttar Pradesh Forest Development Corporation took the matter to the High Court. The High Court negated the assessee's claim for exemption under Section 10(20) but accepted the claim under Section 11(1) on the ground that the work of the Corporation was covered under the definition of charitable purpose in Section 2 of the Act. The Department agitated the matter before the Supreme Court. The Supreme Court upheld the order of the High Court in regard to the exemption under Section 10(20), and remanded the case to the lower authorities for examining the claim of exemption under Section 11(1) because the said claim was not made by the taxpayer before the lower authorities at all.

15.7 *Hillwood Furniture (P.) Ltd. vs. Income-tax Officer: (2015)59 taxmann.com* 265 (Kerala) or (2015) 275 CTR 429 (Kerala)

This judgement has given the ruling that Section 206C does not draw any distinction between 'timber grown in India' and 'timber imported', from abroad.

15.8 *Divisional Forest Officer vs. Income-tax Officer (TDS), Haldwani* (2015) 57 taxmann.com 238 (Delhi-Trib.)

According to this judgement, furnishing of Form No. 27C by buyer at time when collection of tax at source is contemplated under Section 206C, has to be construed as mandatory.

15.9 *Maharashtra State Co-operative Tribal Development Corporation Ltd. vs. Commissioner of Income-tax, Nagpur* (2017) 78 taxmann.com 197 (Bombay)

According to this ruling where Tribal Development Corporation engaged Tribals to collect forest produce, which were sold in auction by corporation, Tribals could not be said to be first seller; corporation would be first seller and be liable to deduct TCS from buyers in auction sale.

15.10 *Natwarlal vs. Union of India* (1999): 102 TAXMAN 49 (MP).

According to this ruling, the process of collection and pruning of tendu leaves does not amount to 'processing' within meaning of Section 206C as nothing new emerges from the process.

PLYWOOD

16. INTRODUCTION

16.1 Plywood is a processed structural material composed essentially of wood element veneer. The veneers may be of different species or different thickness. The structure involves layers of veneers disposed with the grain at right angles in adjacent layers-the layers bonded with synthetic resin glues.

16.2 The properties of plywood are dependent upon its composition, structure and processing steps. The outstanding properties of plywood compared to solid wood are its high shear resistance, its high strength to weight ratio, dimensional stability and its good working properties. The plywood and panel industry in India has made significant progress in last 25 years. The timber resources in the country are inadequate to meet the panel industry requirements. However, plywood and panel industries will help the country to achieve a better utilization of forest resources, widen the available raw materials base and to a large extent upgrade hitherto wasted or idle forest resources.

17. TYPES & GRADES

17.1 Plywood is generally of two grades *viz.* Boiling Water Resistant (BWR) and Moisture Resistant (MR), depending upon the bond strength developed by the adhesive used for bonding the veneers. Plywood for general purposes is classified into three types, namely, AA, AB and BB based on the quality of the two surfaces. A & B are the terms of general permissible defects. The better quality surface is called 'face' and the opposite side is called 'back'. The type of plywood denotes first the quality of face followed by the quality of back.

17.2 The plywood used in the construction, repair and maintenance of marine and river craft is required to withstand rigorous conditions involving changes in temperature, humidity and alternate wetting and drying. In addition they need to withstand attack by marine organisms. The plywood made to the specifications prepared by the Wood Products Sectional Committee at the instance of Ministry of Defence is called marine plywood.

17.3 The manufacturing of general plywood should be as per the IS:303:1989 and the marine plywood must be manufactured as per the IS:710:1976.

18. MATERIALS

18.1 Timber: Until about 1964 only logs of 12–15 species of logs over 60 cm diameters were accepted by the mills. In recent years due to the work done by FRI (Forestry Research Institution) and IPIRI (Indian Plywood Industries Research Institute) the range of peel able species has increased to more than 60 species and more species are being tested both at FRI, Dehradun and IPIRI Bangalore. Logs of 30 cm diameters onwards are accepted now.

18.2 Tables 1 & 2 of IS: 710–1976 list the species of timbers suitable for face veneers and core & cross band veneers respectively in the case of marine plywood. Annexure B of IS:303:1989 lists species of timbers used for general plywood. Some of the commonly used timbers suitable for plywood are Gurjan, Hollong, Keruing etc. However, mills also use Mango, Eucalyptus, Semul, Safeda, Poplar and several other species for manufactures of plywood-Arjun (Terminalia arjuna), Birch (Betula) Chaplash (artocarpus chaplasha), Gamari (Gmelina arborea), Gurjan (Dipterocarpus), Indian Oak, Jaman (Syzjgium), Katha (Artocarpus heterophyllus), Mango (Mangifera indica), Neem (Azadirachta indica), Semul (Salmoba malabrica), sisssoo (Dulbergia sissoo) etc. In fact, theoretically any wood can be used for the purpose.

18.3 Adhesives: The adhesive used for bonding the veneers in different grades

of plywood are the corresponding types of adhesives as specified in IS:848:1974. Extenders conforming to IS:1508:1972 may be used with the synthetic resin adhesive (amino resins). However, synthetic resin adhesives when extended by more than 25% should contain suitable preservative chemicals in sufficient concentration to satisfy the mycological test. Fillers, if used, do not exceed 10% mass of solid content of the glue. Normally used adhesives are Urea formaldehyde (UF) and Phenol formaldehyde (PF). Plywood produced from PF is water-resistant and can be used in exposed conditions.

18.4 Machines: Machinery normally required for a plywood manufacturing unit are-Chain saw, Peeling lathe, Veneer clipper, Dryer, Boiler, Glue spreader, Aluminium cauls or plates, Hot press, D.D. saw, Sanding machine, Slicer machine (for decorative veneer), Resin kettles (for preparing glue), Storage tanks (for chemicals), Pond for storage of logs, cranes & other material handling equipment.

19. MEASUREMENT OF LOGS

The measurement system of timber allows for wastage. The actual quantity of timber is normally 1.273 times that of measured quantity and in addition measurement allowance of 4 to 5% is acceptable. The logs are measured either in cubic metric (CBM) or cubic feet (CFT). Theoretically, 1 CBM = 35.3147 CFT, but in India in practice 1 CBM = 27.74 CFT.

20. MANUFACTURING

The diagrammatic presentation of the manufacturing process of plywood is given below:

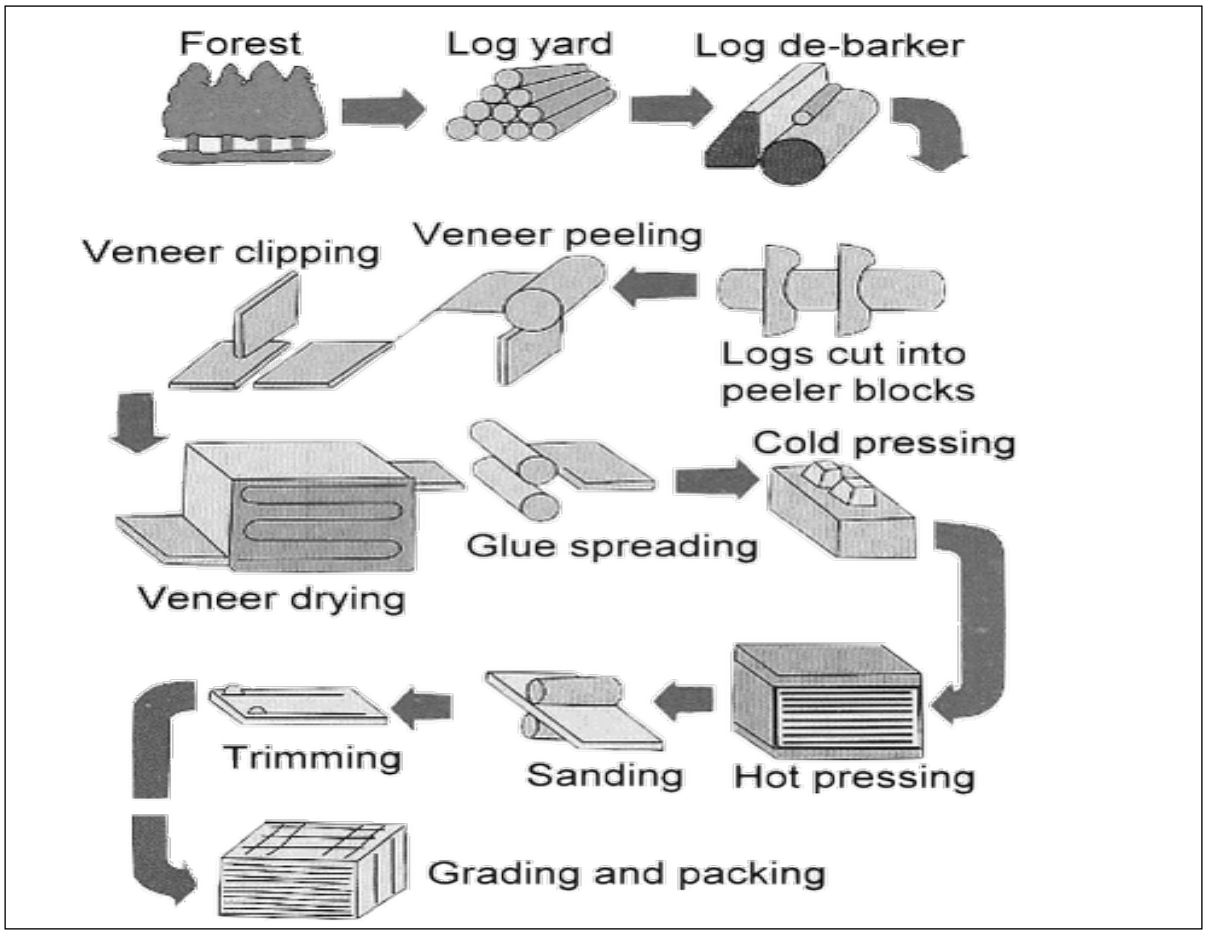


Fig. 3

20.1 Logs: Timber is procured in the form of logs from forests or imported from other countries. Logs are kept in ponds under water to preserve them from becoming dry. Logs in green condition yield better results & yield. At present the rate of duty on imported logs is 15%. The logs are cut (sawing-electric or manual) into blocks of different sizes depending upon the size of plywood to make. The bark of blocks is removed manually by axe. Log to block yield should be 90–95%.

20.2 Peeling: The blocks are loaded into peeling machines for being pilled into veneers of varying thickness ranging from 0.4 mm to 3.0 mm. All plywood plants use rotary peeling system. The peeling lathes are specified by knife length & diameter of logs that can be rotated. The yield of veneer from logs depends on the quality of logs used and varies 50–105% is possible because of measurement system of timber that allows wastage in the measurement itself.

20.3 Clipping: The veneers peeled in the peeling machine are reeled into rolls and then cut into desired width in clipping machines. The normal width varies from 2.5–4 ft.

20.4 Drying: The veneers produced contain very high degree of moisture and are passed through dryers to reduce the moisture content to 6–12%.

20.5 Checking: The dry veneers are sorted out and split ends, cracks, knots, joints, insect holes, dotes, blisters etc. are chopped out. Both the edges of the veneers are clipped to make them straight to enable them to be placed side by side and to avoid gaps.

20.6 Assembly: Face veneer is used for the surface of the plywood and it is placed in such a manner that its grains are along with the length of the plywood. Core veneers and panel veneers form the interior of the plywood. Core veneers are placed in the cross direction to the panel and face veneers. The stacking of panel veneer is done alternately i.e. face then core then panel then face. The number of panel and core veneers to be used depends on the thickness of plywood required.

20.7 Gluing: The core veneers are passed through a glue spreader which spreads & applies the adhesive on both the surface of the core veneers. The glue should be evenly spread and core veneers placed securely cemented together without overlap. No unglued areas or scarf joints should be found on separation of veneers.

20.8 Pressing: The assembled veneers are then placed inside a hot press which presses the assembled veneers under high temperature and pressure resulting in a permanent bond between the veneers. The compression is about 5–8% in UF bonding and 8–12% in PF bonding. Normal specific pressure is in the range of 8–12 kg/sq. cm in PF bonding. Normal specific pressure is in the range of 8–12 kg/sq. cm for UF adhesives and 14–18 kg/sq. cm for PF adhesives. The temperature required for curing of adhesive varies from room temperature to 150 °C. Hot setting phenolics generally come in the range of 140–150 °C.

20.9 Treatment: Boards taken out immediately from the press and while still hot they are immersed in a 2% solution of either sodium penta-chlorophenate or boric acid or 1.9% solution of borax or a combination of these for a period of 10–40 minutes at room temperature of 85–90°C and allowed to dry. All depend on size & thickness of plywood. In case of marine plywood, the board is given treatment by pressure impregnation with fixed type either water soluble or oil based preservatives and having retention of a minimum of 12 kg/sq. m in case of copper-chrome-arsenic composition or 100 kg/sq. m in case of creosote or creosote-

fuel oil composition. The treatment is required to make the ply termite & borer proof.

20.10 Finishing: The treated sheets are then cut into exact size by trimming the edges in a D.D. Saw and cut then sanded to make the surface smooth. The edges are finished and gaps are sealed by using putty. The sheets are then checked, graded and quality is marked.

21. YIELDS & WASTAGE

21.1 There are likely to be many defects in the logs and the veneers and the permissible limits are prescribed in the specifications of the Indian Standards (IS). Their discussion is avoided here as they may not be of any use to the AO during the investigation. There are various tests conducted on the plywood manufacturers which determine the quality of the plywood and hence the price. But these again will not be of any help to the AO. However, after having understood the materials, the machines and the manufacturing process, it is necessary to have fair idea of yields and wastage at the various stages of production so that any quantitative manipulation by the manufacturer can be uncovered.

21.2 In the conversion of logs to veneer and then to plywood, wastage is inevitable. The extent of wastage depends upon many factors such as log quality, species of timber, method of manufacturing etc. Yield figures worked out on a uniform basis are not available for the Indian Plywood Industry. Wood wastage is generally assessed at two points of production *viz*:

a. Wastage at green end i.e. from log yard to clipping of wet veneers.

b. Wastage at dry end i.e. from drying of veneers up to finishing of plywood panels.

In this discussion, the yields & wastage are as per studies made by IPIRI (IPIRI Journal Vol. 4, No. 4 IPIRI Research Report No. 33).

21.3 Cutting Losses: Considerable amount of wood is wasted at present due to non-vertical axe cutting of the log at forest site. Log division if done by axe and drag holes made in case of logging by elephants further add to wood losses. Some factories give less importance to obtain even cuts and peel logs with suitable adjustment of spur knives in the lathe to trim off the defective portion from the veneers. In the study conducted the cross cutting wastage varied from 1.7–10.6% giving an average of 8.95% of the initial log volume.

21.4 Veneer Manufacturing Losses: In many factories, at the time of cross cutting, an extra margin is provided in the length of the bolt which is removed by the spur knives at the time of peeling. This is unnecessary as provision is made in the veneer length for shrinkage and mis-assembly. The quantity of wood wasted due to this excess length is known as "spur trim". The wastage of wood in peeling from logs/ bolts to the stage when the log becomes perfect cylinder (then only full length can be peeled) is called "rounding wastage". Though the rounding waste is associated with irregular shapes of logs/ bolts, a significant share can be attributed to the incorrect centering in absence of guide circles, compass or four points centering device etc. Loss due to final core or roller removed from the lathe after peeling is called "core loss". Core is the central portion of log which cannot be peeled further because of constraints of knives. A common factor which goes unnoticed in many factories is the excess thickness in veneer. Actual thickness of the veneer as peeled being greater than the specified thickness of the veneer required leads to this wastage. The "clipping loss" from reeled veneers is usually dependent on the quality of veneers and facilities available in factories for reeling of veneers. This wastage can be reduced if veneers otherwise wasted at the time of rounding etc. are salvaged by resorting to clipping across

the grain. The total of all these losses are added up to determine the net green veneer recovery (the quantity of usable untrimmed veneers ready for drying). The study gave the following ranges of wastage at each stage and net green veneer recovery.

21.4.1 The percentage is based on initial peeler bolt volume and taking into account 13 species of timber. These percentages vary from one species of timber to another.

21.5 Compression Loss: There is compression loss in plywood during pressing of the veneers (face, cross and panel after gluing operation. The compression of the plywood depends on temperature, pressure applied, duration of the pressure, timber species, moisture content of wood and surface quality of the peeled veneers. The compression is about 5–8% in UF (Urea formaldehyde) bounding and 8–12% in PF (Phenol formaldehyde) bounding. Normally specific pressure required (surface pressure on the plywood area in the press) for UF adhesive is in the range of 8–12 kg/cm and for PF adhesive 14–18 kg/cm. Recognizing that excess pressure results in excess compression and thereby significant loss in plywood yield, dual cycle or two step hot pressing technique is in vogue nowadays. In single cycle the pressure applied is as mentioned earlier and the temperature can vary from room temperature to 140–150°C (higher temperature for hot setting phenolic/ urea resin adhesives). In dual cycle a relatively high pressure of 14 kg/cm is applied to the glued assembly for 1–2 minutes and then reduced to 7–8 kg/cm for the complete curing cycle of the glue line. This low pressure leads to low compression and hence low compression loss. In a study (IPIRI research report No. 33) reduction in compression loss was found to be 2.34%, 2.3%, 2.35% and 2.35% in case of 4 mm, 8 mm, 12 mm & 18 mm plywood respectively. Loss in phenolic resin adhesive bonded plywood compression loss can be reduced by 2–3% i.e. the compression loss will be in the range of 3–4% only instead of 5–12% in case of single cycle compression.

21.6 Quality of Veneers: Apart from the type class & quality of the timber used for obtaining veneers, in rotary cutting the quality of veneer peeled depends to a large extent on lathe settings such as:

a. Pressure bar compression or the associated horizontal and vertical gaps between the tops of knife edge and pressure bar.

b. Knife angle.

c. Knife level.

d. Knife edge with respect to spindle centre.

21.6.1 Both the optimum horizontal gap and optimum knife angle depend on wood species, log temperature, moisture content etc. Most lathe are so designed that the knife angle decreases automatically as the bolt diameter decreases. Factors that affect drying of veneer include both properties of wood and drying conditions. Thickness of veneer, variation in veneer thickness, grain direction on the surface of veneer determine the drying time. The important drier conditions that can affect rate of drying are drier temperature and air velocity across the surface of veneer. One of the experiments conducted by IPIRI, Bangalore revealed that drying schedule determined for each of the species should be taken as guideline to arrive at the best schedule of the veneer dryer.

22. ALLIED INDUSTRIES

22.1 The discussion on plywood industry cannot be complete without brief mention of other wood substitutes. Dwindling forest resources and general bar on exploitation of timbers has led to search for alternative materials

for the building and construction industry. Now there is wide array of substitutes available in the market. Some of the items are discussed here.

22.2 Reconstructed Panel Products (RPP) made from agricultural and wood residues. This is a polymer fibre composite came to be known as Particle Board (PB) and Medium Density Fibre Board (MDF). PB and MDF are now available in many varieties-low density, medium density and high density-veneered, pre-laminated etc.

22.3 Conversion of trees into sawn timber or plywood involves high wastage 50–60%. The waste wood is sold in the open market as fire wood. However, PB industry utilises 100% of the volume of the trees. PBs are not prone to insect attack and have dimensional stability. PBs are made using teak wood particles from teak branches. Graded particles where different varieties basic wood and the bonding material are Urea formaldehyde or Phenol formaldehyde, all exposed edges of the board are sealed by applying a thick coat of sealants like synthetic wood primer, varnish, laquer. It is followed by beading with hard timber. Particle boards are best used as panel inserts.

22.4 A rice husk board can be fibre reinforced, over laid or tailor made. Rice husk is mixed with small proportion of a suitable fibre and this mixture is bonded with a phenolic resin adhesive. This board can be overlaid on both sides with phenolic resin treated bamboo mats or jute fabric. The strength of rice husk board can be improved with use of suitable disposition of reinforcements in and on the surface and may be made to approach plywood and even solid wood in strength properties. The board is resistant to termite, borer & rodent and water and fire proof. They are good for panel doors and flush doors.

22.5 Other variety Cement Bonded wood particle Boards are made with 60% cement, 20% wood particle and 20% water and other chemicals. Wood species which are not suitable for other purposes like fast growing species Eucalyptus and Casurina can be used with advantage. Ordinarily wood & cement are not compatible and hence the wood is stored for 3 months to ensure that moisture content is equalised and the cement poisons like sugar and tannin are destroyed. Wood is flaked in small size with thickness of 0.2 to 0.4 mm. All components like cement, wood and liquid are mixed in exacting proportions chemically and physically and mixture is spread on conveyer cauls forming a continuous mat that is pressed in 1000 ton hydraulic press and subjected to heat for 6 to 8 hours in a ring chamber. Boards are removed from the cauls and are cured for 10 days. It is then trimmed and cut in various sizes. These boards are available as Bison panel in India and are good construction materials.

22.6 The methods of tax investigation are similar for these allied materials as those for plywood delineated below.

23. TAX INVESTIGATIONS

23.1 Theoretically, the manipulation of manufacturing of plywood is possible by suppressing the yield through:

a. Inherent flaw in measuring technique and practices-actual volume of a timber is 1.273 times the measured volume.

b. Showing lesser moisture in timber i.e. dry timber as logs in green condition yield better results and yield.

c. Incorrect thickness of the veneers and incorrect size of the plywood.

d. Higher consumption of the adhesives (most of the plywood factories make their own adhesives).

e. Showing high wastage in peeling and non-utilisation of broken/ smaller veneers.

23.1.1 The technique & losses at various stages discussed earlier should be kept in mind and the records and books examined accordingly.

23.2 Main evasion of tax through suppression of sales or making sales outside the books takes place at the trading level. The wholesaler or the retailer remits the amount to the manufacturer through bank drafts and these drafts are in majority issued through benami/ fictitious accounts. Thus it becomes difficult in investigating the accounts/ trade volume at the trading level. There are purchasers available who want to purchase by payment of cash.

23.3 Except for the stage of exploitation of forest where day to day reporting on felling of trees & production of timber is made to the Forest Department, there is no statutory reporting at any level except at manufacturing level at trading level to GST authorities.

24. CASE STUDY: SEARCH AND SEIZURE OPERATIONS CONDUCTED ON A MAJOR PLYWOOD TRADER OF INDORE

24.1 During the month of January, 2019, the Investigation Wing, Indore of the IT Department was involved in search and seizure operations at a major plywood trader of Indore, along with its associate concerns. The search operations led to unearthing of a unique modus operandi, which holds true for the entire industry, and stems from collusion among all stakeholders concerned.

24.2 Generally, quantitative suppression of purchases, sales and income is done by doing out of books trading of goods. The purchase and sale of plywood are invoiced at a much lower per unit rate.

24.3 Initially, the goods are purchased at their full market price, but a much lower per unit cost is shown in the purchase invoice that is entered into the books of account. The balance payment (at the full rate) is made in cash. The moment particular goods is purchased, its pre-determined sale price is fed into the system using a particular formula (3.5% margin over and above billed purchase cost + freight). Thus, when that particular goods are sold, the sale invoice is generated which automatically factors in this pre-determined sale price, leading to an under-billing. The actual amount charged, however, is determined as per a detailed "dealer's price list" prepared and maintained by the assessee. This dealer's price list is used for marketing and quotation purposes. While the billed amount is paid through banking channels, the balance amount is received in cash, which is collected by the various collection agents employed by the company. The assessee maintains parallel invoices, one set for recording in the books of account and the other for internal record and collection. The second or other set of invoices is not revealed to tax authorities.

24.4 In order for the collection to be made, the collection agents carry a separate printed invoice, generated on a parallel system of maintaining ledger accounts, which quotes the sale price at exactly $1/10^{th}$ of the actual sale price, i.e. with one '0' less. For example, if the sale price mentioned in this parallel invoice for good 'X' is Rs. 3.5 per sq. ft., its actual sale price mentioned in the dealer's price list/ quotation is exactly 10 times, i.e. Rs. 35/- per sq. ft. Such parallel invoices are used for collection by the agents because if at any point of time authorities like IT find these invoices, they will never get a true picture of the real quantum of turnover. What is finally entered into the books of accounts is not Rs. 35/-, but only the pre-determined sale price as per the formula mentioned earlier, around Rs. 14/- in this case, which normally leads to a suppression of 60% of turnover (on an average). While Rs.

14/- is paid by accounted banking channels, the balance Rs. 21/- is received in cash.

24.5 In this manner, it is estimated that around Rs. 150/- crores of turnover has been suppressed over the last 7 years by the assessee (with corresponding suppression of purchase). The above modus operandi has been discovered with supporting evidences of parallel invoice/ ledger, kaccha chits of purchase amount, actual collection in cash upon sale, dealer's price list, and sale bill entered in Tally. This is backed up by corroborative statements on oath describing the modus operandi in detail by 3 key players involved in the entire chain–the accountant who prepares the sale invoice, the person who safeguards the kaccha chits which mention the true purchase rate, and the collection agent who collects the balance amount after sale in cash using the parallel 1/0th invoice. The unaccounted income earned through this modus was invested by the assessee in his real estate business, expensive cars, frequent foreign tours and maintaining a flashy lifestyle.

25. CONCLUSION

The investigation tips given in this write-up are indicative in nature and the AO may use this write-up as a tool to initiate probe. The assessees always evolve new modes of tax evasion and the AO should remain alert.

CHAPTER

8

Gutka Industry

1. PAN MASALA INDUSTRY AND POTENTIAL MARKET

1.1 The custom of chewing breath fresheners after meals has a very long history, particularly in India. Pan masala is a balanced mixture of areca nuts (also known as supari), catechu, cardamom, lime, flavouring agents and some natural perfuming materials. It is widely used to remove the bad odour of the mouth by providing a fresh breath and comes in attractive user-friendly packets and containers. Despite its growing demand in rural areas, pan masala is gaining prominence in urban areas of India. Factors like its immense popularity, constantly increasing disposable incomes, convenient packaging, aggressive advertising campaigns by manufacturers and the large-scale switching of consumers from tobacco products to pan masala are currently encouraging the growth of pan masala market. According to IMARC group (International Market Analysis Research and Consulting group), the Indian pan masala market has reached values worth around INR 38,886 Crores in 2018 growing at a CAGR of 12.62% during 2011–2018.

1.2 IMARC's latest study **"Pan Masala Market in India: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2018–2023"** has segmented the pan masala market on the basis of state, type and price. Among the various types of pan masala available in the Indian market, pan masala containing tobacco represents the dominating type accounting for more than 50% of the entire market. (which is banned in India) Pan masala containing tobacco is followed by plain pan masala and flavoured pan masala. Exports also represent a major driver of the Indian pan masala market. The Indian exports of pan masala are dominated by UAE, accounting for around one-third of the total export values. UAE is followed by USA, Singapore, Afghanistan, South Africa, Saudi Arabia and Malaysia. The report has also analysed some of the key players operating in the market and provides their business overview and market shares.

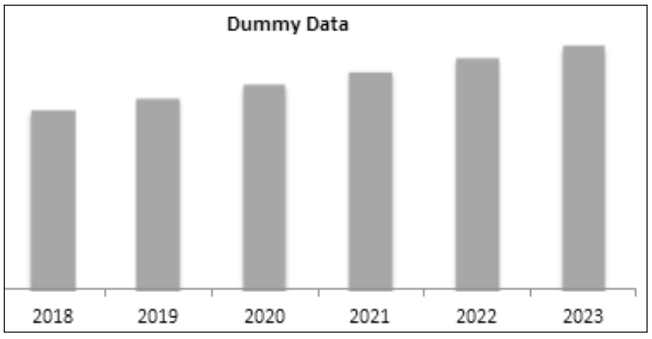


Fig. 1: India: Pan Masala Market Forecast: Value Trends (in INR Crores), 2023

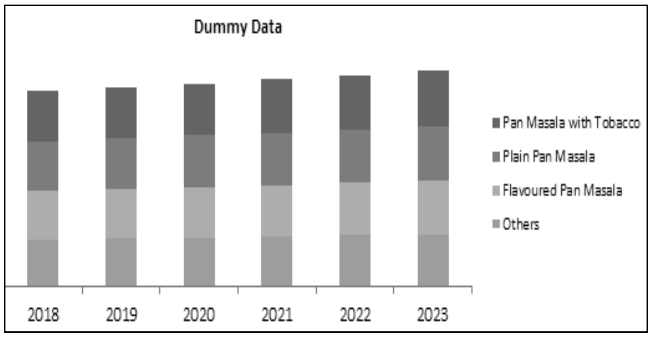


Fig. 2: India: Pand Masala Market Forecast: Breakup by Type (In INR Crores), 2018–2023

2. INDIAN PAN MASALA MARKET TRENDS

2.1 The increased awareness regarding the harmful effects of tobacco products has led to a shift in consumers' interests toward the consumption of flavoured or plain pan masala. Besides this, manufacturers have started offering their products in innovative packaging that is sealed from all corners. This ensures longer shelf life and retains the aromatic fragrance of the product. They have also introduced products in flexible, convenient and cost-efficient packaging, such as pouches or sachets, which can be consumed on-the-go. Apart from this, a large number of market players are focusing on aggressive advertising strategies, including celebrity endorsements, to promote the product and entice consumers to a specific brand or product. Looking forward, the market value is projected to reach INR 66,470 Crore by 2024, growing at a CAGR of 9.33% during 2019–2024.

2.2 Since Pan masala industry is one of the most cash rich industries in India, the industry is involved in large scale tax evasion by way of out of books transactions and unaccounted investment in premium properties. The tax evasion in Pan masala industry is rampant due to distribution of incidence of tax at various levels and complex structure of this industry. The industry uses raw material like lime, areca nut, katha, and some fragrances. The costing of majority of raw material depends upon the quality of raw material and source of raw material. Usually the industry uses low quality raw material with inflated cost of high quality raw material. Further majority of the suppliers of these raw materials are in informal economy, therefore it is easy to purchase raw material in cash from these suppliers to produce out of books finished product.

3. MAJOR PLAYERS IN INDIA

In India the major players in Pan Masala industry are given as under:

i. Rajnigandha
ii. Pan Bahar
iii. Dilbagh
iv. Pan Parag
v. Raj Shri
vi. Manikchand
vii. Chutki
viii. Shikhar

4. DIFFERENCE BETWEEN PAN MASALA AND GUTKHA AND THEIR REGULATORY BODY

4.1 The pan masala and gutkha are synonymous for majority of people, but there is difference between pan masala and gutkha.

Gutkha is common name to all pan masala where the ingredient is areca nut, lime katha tobacco and nicotine. While pan masala does not have nicotine and tobacco as ingredient. In India all the Pan masala having tobacco and nicotine as ingredient (commonly known as Gutkha) are banned by Food safety and Standards Authority of India(FSSAI) on 9th October 2017 by a notification. The Food Safety and Standards (Prohibition and Restrictions on sales) Regulation, 2.3 & 4 prohibits the use of tobacco and nicotine as ingredients in any food items and bans sale of all food products where tobacco is present as ingredient.

4.2 The commissioners/ offices in state govt./ UTs are entrusted with implementation of The Food Safety and Standards (Prohibition and Restrictions on sales) Regulation.

4.3 Therefore Gutkha is banned in India from 9th October 2017. The pan masala is allowed to be manufactured and to be sold in India, which is not having tobacco and nicotine as ingredients.

5. STRUCTURE OF INDUSTRY

The structure of pan masala industry has changed a lot with passage of time. Earlier it was family business with production located at the residential premises of the manufacturers or at small factory premise. With the passage of time the industry has became huge, and the structure of industry has changed to some extent. Some industries are controlled by brand owner and operated by close employees; some industries are owned and operated by brand owners. On above basis the industry may be classified in following two categories.

a. The industry controlled by Brand and operated by employee.

b. Industry controlled and operated by promoter.

6. THE INDUSTRY CONTROLLED BY BRAND AND OPERATED BY EMPLOYEE

Since the pan masala is excisable item, some of the industry in this sector created a structure where brand is controlled by promoter company firm and manufacturing activity is controlled by small firms/ companies having its trusted employees and partner/ director/ share holder of manufacturing concerns. This way the promoter group shifted its legal liability of manufacturing activity on its employees, who are of no means. If one goes through the agreement between brand holding Promoter Company and manufacturing concerns, will find majority of the receipts of manufacturing company will go to the brand owning company/ firm leaving meager amount of receipt of manufacturing concerns. This way the brand owning concern is earning income from pan masala production and sale without any legal liability of manufacturing activity. This design was created by some pan masala industry group to evade penal action on violation of law by manufacturing concerns. On the close recce it will be found that actually the group is controlled by brand owning concerns. The structure may be depicted as below.

Industry controlled and operated by promoter

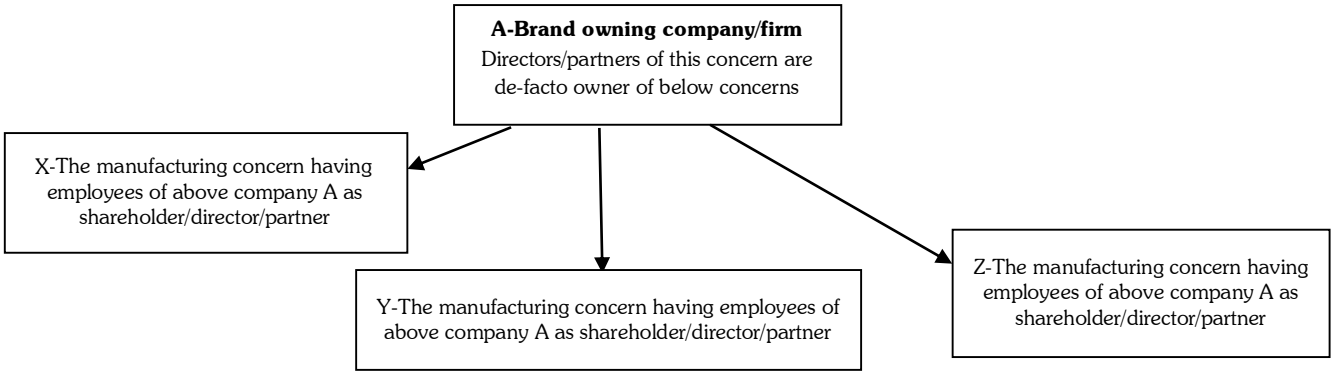

A-Brand owning company/firm
Directors/partners of this concern are de-facto owner of below concerns
X-The manufacturing concern having employees of above company A as shareholder/director/partner
Y-The manufacturing concern having employees of above company A as shareholder/director/partner
Z-The manufacturing concern having employees of above company A as shareholder/director/partner

Chart 1

In some cases the manufacturing of product is carried out by brand owning company/ firm. Here the structure of concern is simple as any other manufacturing concern.

7. PRODUCTION PROCESS

7.1 The pan masala manufacturing require following raw material for manufacturing of finished product.

i. Areca nut.

ii. Kathha.

iii. Lime.

iv. Fragrance/ essence.

v. Pouch/ box.

7.2 There are two streams of business of any pan masala unit one is accounted and other is unaccounted. The unaccounted stream is altogether out of books. The investigation of unaccounted out of books production and sale can only be investigated through intrusive investigation. The raw materials after received in factory premises got entered in following books of accounts RG-1, stock register, Daily stock register. After receipt of the raw materials same is processed and finished materials are prepared after grinding of raw material in prescribed ratio. The finished product is packed in Pouches or boxes depending on the requirement of sale. It is the number of boxes and pouches used for packing are important as the masala is excisable item. The profit declared by pan masala industry ranges from 5–7% on turnover, which is much lower than actual profit.

8. DISTRIBUTION AND MARKETING OF PAN MASALA

8.1 The finished product i.e. pan masala after packing needs to be transported till retailer through its marketing network. The marketing network includes transporter, distributor, whole seller and retailer. The finished product is transported to distributor through trucks and there are various mobile units of GST enforcement agencies. The modus operandi of transport is that the truck driver carries the bill and invoice for the good of actual weight till the godown of distributor. If the vehicle is intercepted in the way they will show the bill and invoice. But if they did not get intercepted by GST enforcement agency then the bill and invoice will be returned back and whole material which was transported to distributor remains unaccounted and out of books. This way the whole material is transported to distributor remains out of books. The distributor transports the material to wholesaler then retailer. The sale proceeds of unaccounted materials remains out of books in the industry. The distribution network may be understood as below flow chart.

There is huge tax evasion in pan masala industry and huge cash generated in this process

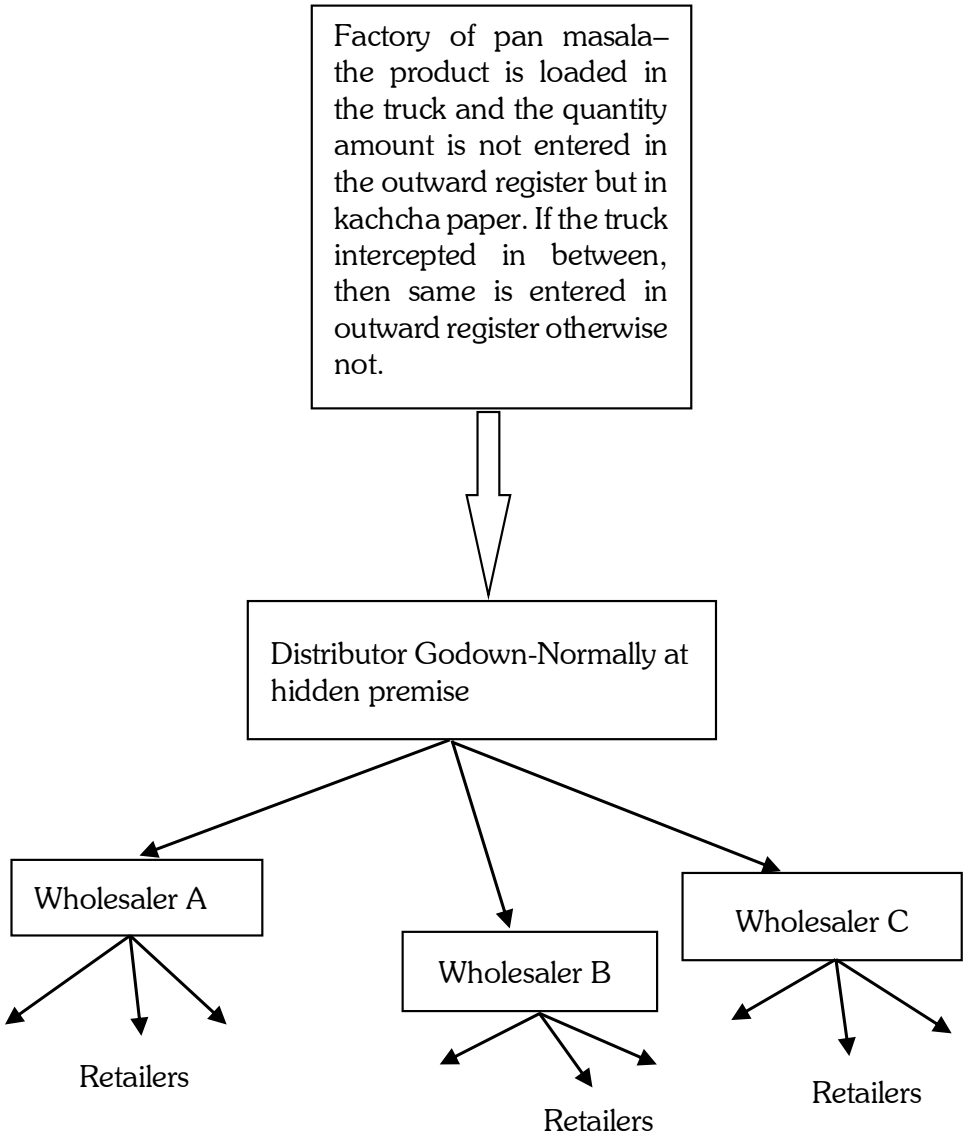

Factory of pan masala– the product is loaded in the truck and the quantity amount is not entered in the outward register but in kachcha paper. If the truck intercepted in between, then same is entered in outward register otherwise not.
Distributor Godown-Normally at hidden premise
Wholesaler A
Wholesaler B
Wholesaler C
Retailers
Retailers
Retailers

Chart 2

8.2 Inflation of Prices of Raw Material: The suppliers of areca nut, lime and katha are from informal sector of the economy. These raw materials have different rates for different quality of raw material. Industry shows the rate of raw material higher but actually they purchase at lower rate with more quantity. Since the item is excisable therefore it is the number of pouch production which important for levy of GST. The purchase inflation is important in the way that without disturbing the books the pan masala manufacturing concern purchases more raw materials by paying fewer prices but booking higher in the books. In this regard the modus operandi is that the raw materials procured are entered in the stock register and same is also entered in the RG-1 and inward register. These registers are statutory registers which have to be maintained by all pan masala company. Therefore to avoid any penal action from GST

and Excise they normally maintain all books of accounts but they also maintain parallel set of books to carry out the out of books transactions.

8.2.1 Books of accounts and registers maintained by pan masala company. The books of accounts which has to be maintained by Pan masala Company are as below.

i. RG-1 and RG-2
ii. Stock register
iii. Daily stock register
iv. Daily production sheets
v. Inward register
vi. Out ward register
vii. Gate pass register
viii. Purchase register
ix. Sale register
x. Cashbook etc

8.3 Role of Pouch Manufacturing Concern: For law enforcement agency the number of pouch used for production of finished product is most important. There are certain pan masala group who have their own packaging industry on the other hand other group purchase pouches from different packaging industry. The number of pouch used is an important criterion for levy of excise duty, therefore the investigation on this front is most important for any law enforcement agency. The pan masala manufacturing industry purchase pouch out of books and same used for out of books production and sale of the pan masala. Therefore packaging industry, which is supplier for pan masala industry, is most important for investigation of tax evasion of this industry.

8.4 Investigation of out of Books sale, Generation of Cash and Mode of Tax Evasion

8.4.1 Out of Books Sale: The main modus of tax evasion in pan masala industry is out of books sale. The company manufactures the finished product out of books, purchases pouches out of books and sale out of books to generate cash. Tackling this menace needs concerted effort in investigation.

8.4.2 Investigation of Suppliers of Raw Material: The raw material suppliers are either in informal economy or part of formal economy. The pan masala manufacturer creates an agent who in turn opens the various proprietorship concerns in the name of either the employees or daily wage laborers. These accounts are used for cash deposit and subsequent transfer to the suppliers of the raw material. The raw material suppliers issue the bill of goods in the name of concern which transferred the fund to the account of suppliers. This way the unaccounted cash got deposited in the accounts of employees and same have been used for purchase of raw material which in turn used for out of books production of finished product.

8.4.2.1 The finished product is transported through transport vehicles to different distributors having genuine bill/ builty having exact detail of the product. Here the mobile unit of state VAT/ GST if intercepts the vehicle the driver shows the sale bill and builty and then the sale is booked in the books of assessee company otherwise if not intercepted by any enforcement agency the genuine bill returned back to company and same is not entered in the books of accounts. This way the distribution of unaccounted material is totally dependent upon the vigil of mobile unit of law enforcement agencies. The whole mode can be depicted as bellow.

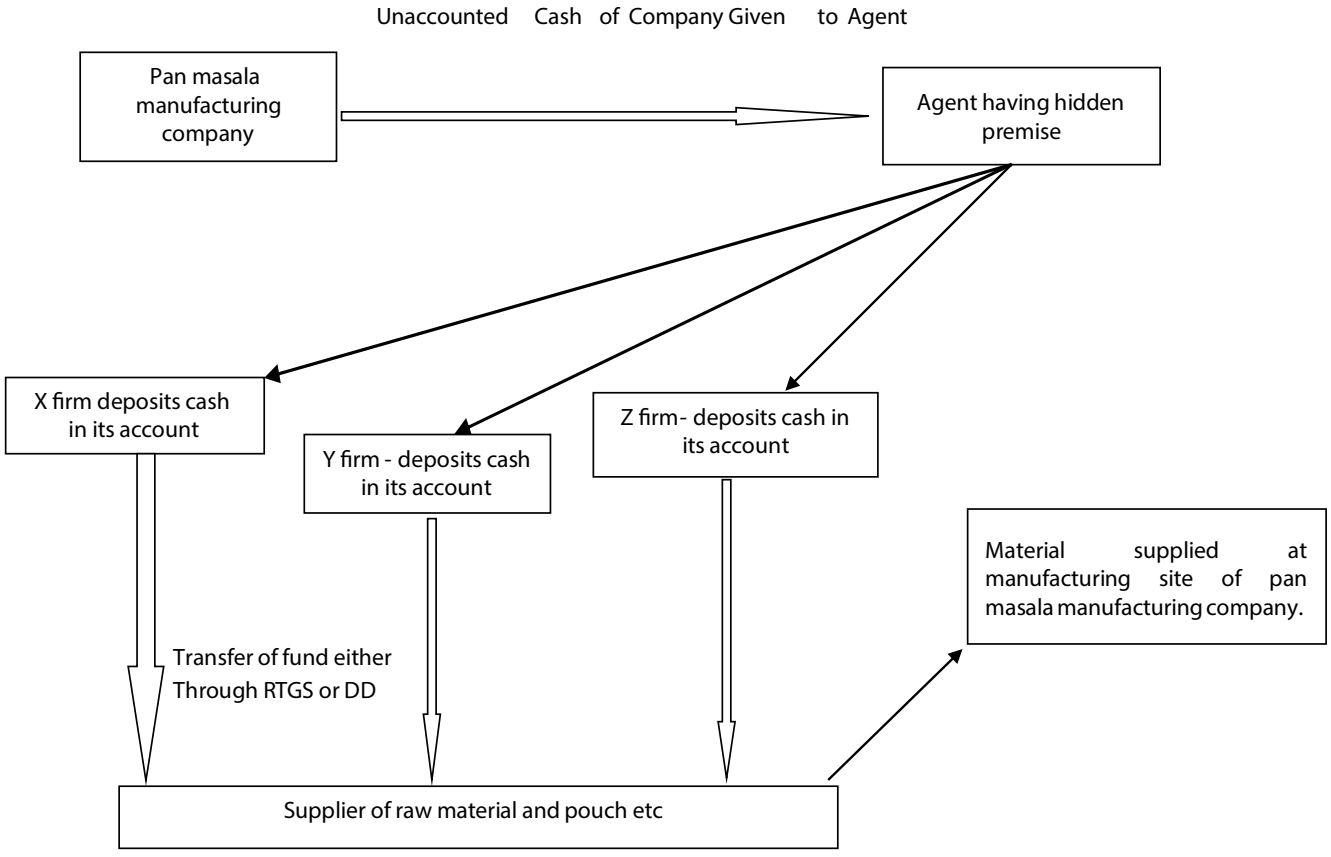

Unaccounted Cash of Company Given to Agent
Pan masala manufacturing company
Agent having hidden premise
X firm deposits cash in its account
Y firm - deposits cash in its account
Z firm- deposits cash in its account
Material supplied at manufacturing site of pan masala manufacturing company.
Transfer of fund either Through RTGS or DD
Supplier of raw material and pouch etc

Chart 3

8.4.2.2 The above flow chart shows that the agent who is either close employee of the pan masala company or any other commission agent. The agent registers number of firms in the state VAT department and collects cash from the key persons of the pan masala manufacturer and deposits the same in their various bank accounts. After depositing the same, he transfers the fund to the bank account of suppliers of the raw material. The supplier transfers the raw material to the factory premise of the pan masala manufacturer. This way the whole unaccounted out of books production of pan masala takes place. Further the finished product is sold through various distributors across the country.

8.5 How to Crack the Case

8.5.1 From above discussion on modus operandi of the out of books transactions of pan masala industry it is clear that the following are the links of the chain which needs thorough investigation to find out the exact amount of tax evasion and incidence of tax liability.

i. The agent.

ii. The supplier of areca nut.

iii. The supplier of lime and kattha.

iv. The supplier of packaging material.

v. Pan masala manufacturer.

8.5.2 The investigation requires thorough analysis of important suppliers and agents of the group. The books of accounts discussed above needs thorough analysis and also the field investigation of vendors are also need to be done to quantify the amount of purchase of raw material. Sometimes same truck number is used for transportation of raw material in different invoices on the same date; the close analysis of the invoices gives leads to the manipulation of accounts. Further the inward register daily stock

register and daily production sheets and out ward register need to be analyzed, to quantify the out of books sale.

8.5.3 There are various models of out of books transaction but one of them is very rampant in North India is creation of an agent in the purchase chain to make cash purchases. An independent agent or any employee of company is created as agent, who in turn creates number of firms after getting registration from GST offices and opens dozen of accounts in the name of these shell firms. The agent collects the cash from Pan Masala Company and deposits the same in various accounts of the shell firms created by him. Later on this cash fund is transferred to suppliers account through RTGS or demand draft. The supplier of raw material supplies the material such as areca nut, lime, pouches, katha etc. to the factory premises of the pan masala company, but invoices raised in the name of shell firms created by the agents. This way the pan masala company affected unaccounted cash purchase by just creating an agent in the chain of purchase. These agents are like entry operators who work on the commission. Usually these agents operates for one year with help of these shell firms later on they close the same and create other set of shell firms. This can be explained by a case study on which search and seizure action was executed.

9. CASE STUDY I

9.1 The search and seizure action was executed on ABC ltd (Pan Masala Manufacturer), its agent Mr. X the packaging material supplier XYZ Ltd. During the search action dozens of accounts were found maintained and operated by the Mr. X in the name of various shell entities. The cash was being deposited in the bank accounts of shell entities maintained by Mr. X and the same cash was being transferred to bank account of XYZ Ltd. through RTGS and demand draft. During the search the XYZ Ltd. could not substantiate the delivery of goods to any shell entity of Mr. X, rather goods were delivered to the premise of ABC Ltd. Further ABC Ltd. has not shown corresponding goods in its receipt register/ stock register. During the investigation the agent also accepted that he has made purchases from XYZ Ltd. on behalf of ABC Ltd. on the basis of commission. Though the cash movement was not traced but non-filing of ITRs by firms of Mr. X, delivery of goods to the premise of ABC Ltd without corresponding payments established that the purchases of raw material have been made out of books and the same have been used for out of books manufacturing of finished product.

9.1.1 The AO needs to carry out the investigation about out of books transaction. The one which needs thorough investigation is of all major suppliers, agents and transporters to nail the issue. The stock register and production sheets of the factory need to be examined to quantify the exact amount of out of books sale. The cash generated through the out of books sale is generally applied for acquisition of premium assets and luxury expenditure.

9.1.2 In case the DDIT wants intrusive action, he must cover the supplier of packaging material, major distributors and their go downs to quantify the scale of tax evasion by the Pan Masala Company. The distributor and supplier of packaging material are important link in the chain. The incidence of excise duty depends on the number of pouches manufactured. Therefore the correct purchase of packaging material is important for assessing the production of finished product. Likewise the number of machines operated at the factory premise is another important criterion for the incidence of excise duty. It is found in various cases that Pan Masala Companies either use hidden premise to store packaging materials and Machines or they

create their employee as machine owner and put the machine in some hidden premise. These things have to be kept in mind while carrying out the pre search investigation of Pan Masala Company. The DDIT must cover all the hidden premise of the group. Further another link is the distributor. If material produced out of books then the same needs to be marketed through distributor. If proper recce carried out and all the godowns of distributors located, it is most probable that the entire finished product which are produced for marketing will be found. The physical stock and stock register of distributor shall be examined to quantify the exact amount of Pan Masala traded unaccounted.

9.2 Application of Unaccounted Cash: It is invariably found that the pan masala industry usually have another limb of business either creation of house property income, or real estate or hospitality sector. These are the sectors where cash can be applied to large extent. Starting the investigation of pan masala group will be incomplete without the investigation of acquisition of various assets by the group and its promoters.

9.3 Acquisition/ Creation of Premium Assets by Pan Masala Group and its Investigation: The promoters of pan masala group usually invest for acquisition of following property.

i. Hotel in area where circle rate is lower.

ii. Purchase of commercial property where circle rate is lower.

iii. Purchase of agricultural land in the region where circle rate is lower.

9.3.1 It is seen that almost all the pan masala group and its promoters declare huge income under House Property, Long Term Capital Gain etc. the house property acquired in the area where circle rates are lower and property is purchased on premium by applying huge cash component for acquisition of property. In this regard the market rate of the property can be taken from any real estate agent of the area. Further the seller of property and his bank accounts may be examined thoroughly; if seller is individual the cash component might reflect in his bank accounts. In some cases the seller may be real estate developer/ builder, in these cases it will not be easy to trace cash component, here the assistance of DVO may be taken to find out the correct value of the property under consideration.

9.3.2 In some cases pan masala group purchases land and constructs the hotel by contractor. In this type of case the investigation of contractor, assistance of DVO and analysis of bank account of company in which hotel is constructed gives lot of leads of unaccounted investment.

10. CASE STUDY II

One group purchased land in an area where circle rate/ collector rate of land was very low, though the market rate was high. The investigation started and sellers of the land were examined and it was found that the sellers who were generally farmer deposited the cash received from the pan masala group in their bank accounts. When examined they all accepted that they have received cash in lieu of land sold to pan masala group. Further the farmers have no other alternative income. To substantiate the same other transaction details were called from the sub registrar and it was found that within a month there were 11 transactions, out of which two transactions were at the rate much higher than the rate which was disclosed by pan masala group. Further it is found that if cash deposited in the bank account of farmers are taken in to account the transactions of all 11 cases comes similar. On the basis of these circumstantial evidences and market rate and statement of

farmers it was established beyond doubt that the pan masala group has made huge cash in the acquisition of land.

10.1 Further the hotel constructed on the land was of 60 rooms sprawling campus with five star facilities. On investigation of bank account of the company in which hotel was constructed it was found that there was no major transactions in the accounts. The contractor of the hotel was examined and it is found that major fund have been given to contractor in cash. By thoroughly examining contractor's accounts and assistance of DVO huge application of cash was found and concealment was detected.

10.2 The investigation of pan masala industry needs intrusive investigation as the modus operandi is very complex and it is very easy to carry out unaccounted transaction in this industry. The Assessing Officer or the DDIT who is investigating the pan masala company should collect the show cause notices issued by Excise Department to understand the tax evasion by particular company. The show cause notices of Excise Department is very helpful as usually these pan masala companies are constantly watched by excise department due to rampant tax evasion in this Industry.

11. CONCLUSION

The Investigating Officer/ AO should be aware of the modus operandi of tax evasion in the industry which is mainly cash based. The recent introduction of GST Law will be of great help to track the movement of goods and the consequent transactions. The AO should be able to match the sales data from GST returns filed by the trader/ manufacturer and can also get some clue from e-way bills.

CHAPTER 9

Leather & Footwear Industry

A. LEATHER INDUSTRY

1. INTRODUCTION

1.1 Chronologically the birth of Leather in India dates back to 3,000 years B.C. The innate strengths, innovative technology and marketing strategies have converted the comparative advantage of India into a commercial success making the country a cynosure of Leather and Tanning in the Global Leather Map. The leather industry occupies a place of prominence in the Indian economy in view of its massive potential for employment, growth and exports. There has been an increasing emphasis on its planned development, aimed at optimum utilization of available raw materials for maximizing the returns, particularly from exports. Indian Leather Development Programme (ILDP) aims at augmenting raw material base through modernization and technology upgradation of leather units, addressing environmental concerns, human resource developments, supporting traditional leather artisans, addressing infrastructure and establishing institutional facilities.

1.2 This sector is known for its consistency in high export earnings and it is among the top ten foreign exchange earners for the country. With an annual turnover of over US$ 12 billion, the export of leather and leather products increased manifold over the past decades and touched US$ 5.69 billion during 2018–19, recording a Cumulative Annual Growth Rate of about 3.09% (5 years).

1.3 An Overview of Indian Leather Industry (*Source*-Council for Leather Exports):

i. The Leather Industry holds a prominent place in the Indian economy. This sector is known for its consistency in high export earnings and it is among the top ten foreign exchange earners for the Country.

ii. The export of footwear, leather and leather products from India reached a value of US$ 5.69 billion during 2018–19.

iii. The leather industry is bestowed with an affluence of raw materials as India is endowed with 20% of world cattle & buffalo and 11% of world goat &

sheep population. Added to this are the strengths of skilled manpower, innovative technology, increasing industry compliance to international environmental standards, and the dedicated support of the allied industries.

iv. The leather industry is an employment intensive sector, providing job to about 4.42 million people, mostly from the weaker Sections of the society. Women employment is predominant in leather products sector with about 30% share.

v. India is the second largest producer of footwear in the world, producing about 2.41 billion pairs (2017), second only to China.

vi. India is the second largest exporter of leather garments and third largest exporter of Saddlery & Harness in the world.

vii. The major production Centres for footwear, leather and leather products in India are located in the States of Tamil Nadu–Chennai, Ambur, Ranipet, Vaniyambadi, Vellore, Pernambut, Trichy, Dindigul and Erode; West Bengal–Kolkata; Uttar Pradesh–Kanpur, Agra, Noida, Saharanpur; Maharashtra–Mumbai; Punjab–Jalandhar; Karnataka–Bengaluru; Telengana–Hyderabad; Haryana–Ambala, Gurgaon, Panchkula, Karnal and Faridabad; Delhi; Madhya Pradesh–Dewas; Kerala–Kozhikode and Ernakulum/ Cochin; Rajasthan; Jaipur; Jammu & Kashmir; Srinagar.

1.4 Strengths of Indian Leather Sector

i. Own raw material source–About 3 billion sq ft of leather produced annually.

ii. Some varieties of goat/ calf/ sheep skins command premium position.

iii. Strong and eco-sustainable tanning base.

iv. Modernized manufacturing units.

1.5 Emerging Strengths

i. Design development initiatives by institutions and individuals.

ii. Continuous modernization and technology up-gradation.

iii. Economic size of manufacturing units.

iv. Constant human resource development programme to enhance productivity.

v. Increasing use of quality components.

vi. Shorter prototype development time.

vii. Delivery compliance.

viii. Growing domestic market for footwear and leather articles.

1.6 Highlights of Product Segments of Indian Leather and Footwear Industry

i. Tanning Sector – Annual availability of leathers in India is about 3 billion sq.ft. India accounts for 13% of world leather production of leathers. Indian leather trends/ colors are continuously being selected at the MODEUROPE Congress.

ii. Footwear Sector – India is Second largest footwear producer after China, with Annual Production of 2.41 billion pairs (2017). India is also the second largest consumer of footwear after China, with a consumption of 2.49 billion pairs.

iii. Footwear (leather and non-leather) export accounts for about 45.48% share in Indian leather and footwear industry's export (2018–19). The Footwear products export mix is: Gents 58%, Ladies 30%, Children 9% and others 3%.

iv. Leather Garments Sector – India is the second largest global exporter, next only to Italy, with a global market share of about 17%. Accounts for 8.23% share of India's total export from leather sector (2018–19).

v. Leather Goods & Accessories Sector including Saddlery & Harness – India is the fifth largest global exporter. Accounts for about 28% share of Indian leather and footwear industry's total export.

1.7 India's Export of Leather & Leather Products for 5 Years

Table 1

—Value in US$ Mn

Product	2014–15	2015–16	2016–17	2017–18	2018–19
Finished Leather	1329.05	1046.45	888.39	874.24	721.73
Leather Footwear	2278.18	2147.98	2128.87	2193.86	2195.47
Footwear Components	361.29	284.34	298.69	335.24	319.10
Leather Garments	604.35	553.11	518.96	518.96	468.48
Leather Goods	1452.83	1370.04	1365.22	1365.79	1434.24
Saddlery & Harness	162.7	146.38	155.88	155.97	159.35
Non-Leather Footwear	306.44	306.74	296.68	296.91	392.63
Total	6494.84	5855.06	5646.79	5740.97	5691.00
% Growth	9.37%	-9.85%	-3.56%	1.67%	-0.87%

Source: DGCI&S

1.8 % Share of Leather & Leather Products FY 2018–19

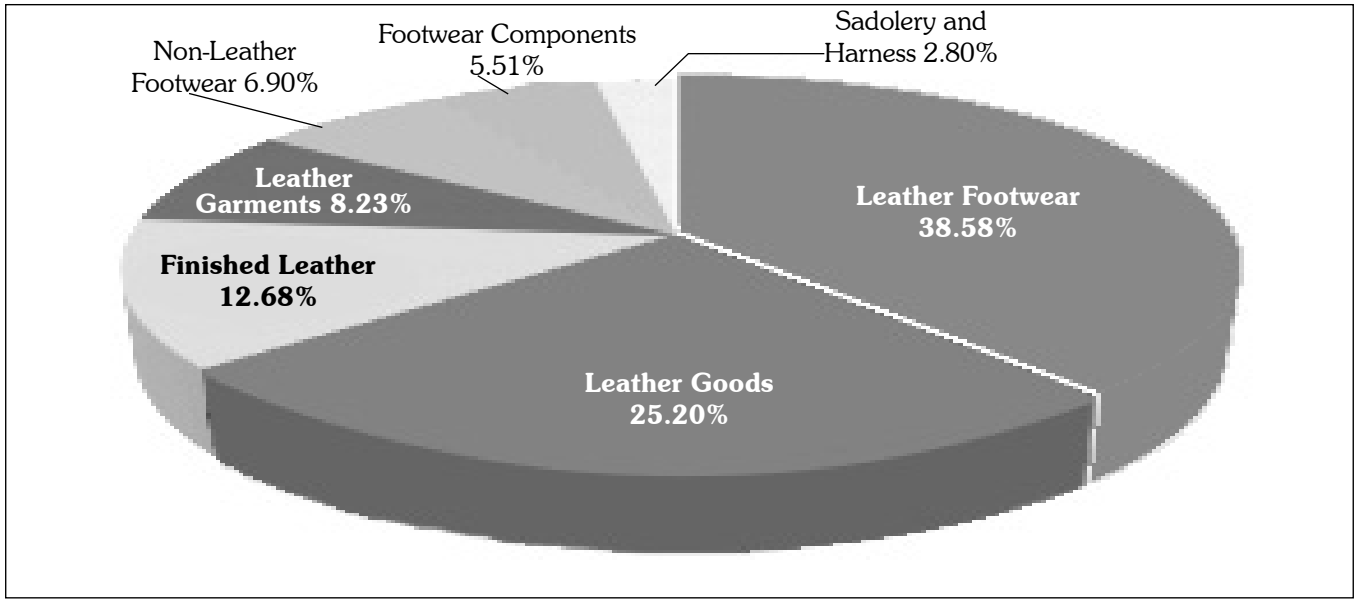


Fig. 1

1.9 Major Markets

i. The major markets for Indian Leather & Leather Products are USA with a share of 15.70%, Germany 11.58%, UK 10.50%, Italy 6.48%, France 5.68%, Spain 4.54%, UAE 3.97%, Netherlands 3.42%, Hong Kong 3.34%, China 2.60%, Poland 2.02%, and Belgium 2.00%.

ii. These 12 countries together accounts for nearly 71.84% of India's total leather, leather products and footwear export.

iii. European Union accounts for 54% of India's total export of leather and leather products.

1.10 % Share of India's Exports of Leather & Leather Products in Top 12 Countries in US $ MN FY 2018–19

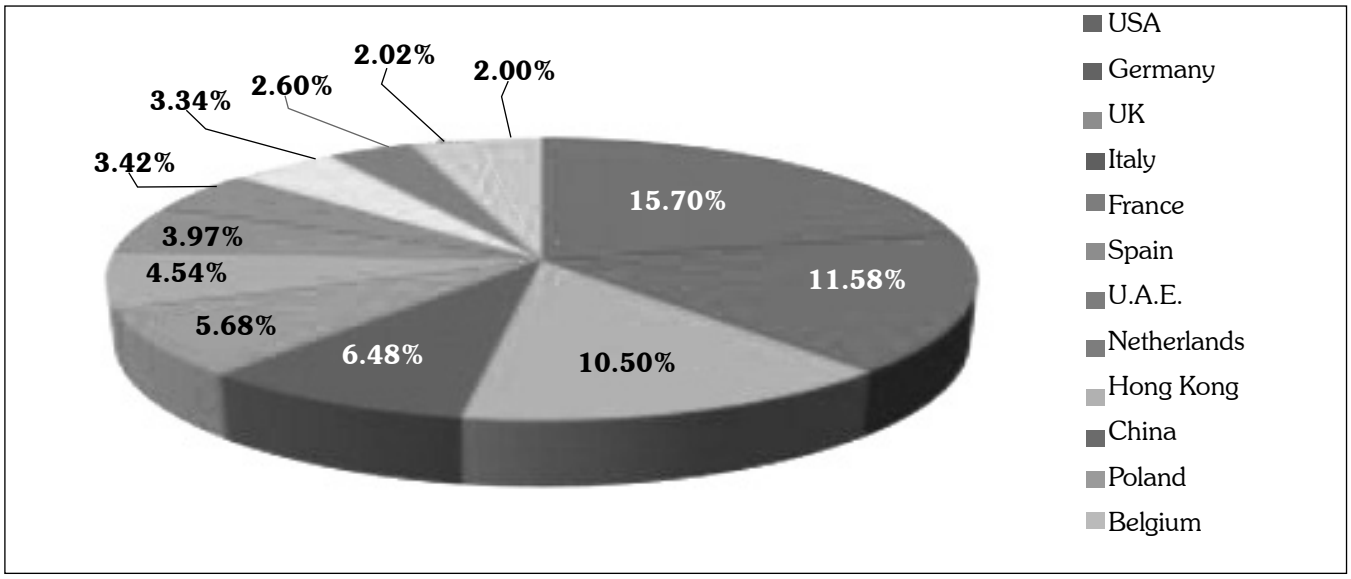


Fig. 2

1.11 India's Export of Leather & Leather Products to Various Countries for Last 5 Years.

Table 2

(Value in Million USD)

Country	2014–15	2015–16	2016–17	2017–18	2018–19	%Share of 2018–19
USA	768.06	834.10	867.19	847.30	893.68	15.70%
Germany	800.20	674.19	657.37	684.41	659.18	11.58%
UK	751.33	716.49	606.18	616.41	597.30	10.50%
Italy	504.26	407.91	374.09	389.06	368.71	6.48%
France	371.75	308.45	287.74	326.38	323.02	5.68%
Spain	351.27	327.86	293.43	281.30	258.26	4.54%
U.A.E.	281.07	263.15	226.72	161.27	226.18	3.97%
Netherlands	224.92	182.97	169.00	196.98	194.43	3.42%
Hong Kong	422.11	315.26	265.60	248.07	190.31	3.34%
China	194.26	162.21	173.72	170.34	148.21	2.60%
Poland	81.74	65.20	101.06	144.47	115.02	2.02%
Belgium	108.88	84.84	104.90	114.80	114.09	2.00%
Somalia	—	100.12	94.12	58.82	102.24	1.80%
Vietnam	115.57	105.54	92.38	104.81	98.44	1.73%
Australia	84.66	84.71	82.66	91.16	95.36	1.68%
Portugal	68.39	62.13	67.61	68.62	68.77	1.21%
Denmark	83.90	76.17	77.22	69.35	67.39	1.18%
Korea Rep.	68.47	82.38	68.65	67.22	66.12	1.16%
Japan	56.21	59.24	63.87	71.42	65.53	1.15%
Russia	49.96	49.01	51.15	56.08	52.59	0.92%
South Africa	55.04	52.87	44.13	43.80	52.28	0.92%

Table 2: Contd...

...Table 2: Contd.

Country	2014–15	2015–16	2016–17	2017–18	2018–19	%Share of 2018–19
Chile	53.12	52.18	41.85	44.90	48.87	0.86%
Malaysia	62.99	54.58	48.60	48.77	46.32	0.81%
Austria	35.48	26.20	27.86	46.26	43.82	0.77%
Canada	59.24	47.25	46.94	50.50	43.27	0.76%
Sweden	46.48	38.14	40.83	43.20	40.02	0.70%
Nigeria	12.30	17.02	20.29	24.75	37.53	0.66%
Indonesia	28.95	25.62	26.97	33.82	37.23	0.65%
Mexico	8.57	12.49	12.14	19.36	36.07	0.63%
Saudi Arabia	47.42	36.77	40.86	37.87	33.65	0.59%
Kenya	8.26	12.73	30.25	22.04	32.29	0.57%
Switzerland	37.05	29.74	24.83	30.37	31.41	0.55%
Slovak rep	0.00	30.71	31.48	36.44	26.61	0.47%
Hungary	30.96	23.46	28.23	24.65	24.31	0.43%
Thailand	28.79	18.22	19.82	19.82	20.20	0.35%
Bangladesh	18.08	17.66	34.98	27.59	19.84	0.35%
Finland	23.55	16.80	17.25	19.76	18.64	0.33%
Turkey	39.63	27.60	19.96	22.63	16.31	0.29%
Israel	13.92	13.35	13.24	15.87	15.86	0.28%
Cambodia	10.81	12.62	10.37	7.27	10.84	0.19%
Czech Republic	22.52	10.45	9.34	11.91	10.52	0.18%
Greece	14.22	10.95	10.16	10.28	10.46	0.18%
New Zealand	12.11	11.23	9.81	9.88	10.16	0.18%
Oman	11.21	12.76	12.29	9.32	9.46	0.17%
Sri Lanka Des	10.13	13.85	14.42	12.34	9.39	0.16%
Singapore	22.12	23.49	33.04	14.42	9.22	0.16%
Sudan	31.40	20.17	14.63	8.86	9.10	0.16%
Taiwan	12.08	9.87	8.97	8.07	8.44	0.15%
Norway	15.00	12.31	7.54	8.76	6.32	0.11%
Djibouti	0.00	14.79	11.19	8.56	6.28	0.11%
Others	336.40	187.24	209.98	249.40	261.02	4.59%
Total	6494.84	5855.06	5646.79	5740.97	5691.00	100.00%

Source: DGCI&S

1.12 Future Outlook

The Government of India had identified the Leather Sector as a Focus Sector under 'Make in India' programme keeping in view of its immense potential for growth and employment generation. Accordingly, the Government is also implementing various Special Focus Initiatives under the Foreign Trade Policy for the growth of leather sector. With the implementation of various industrial developmental programmes as well as export promotional activities; and keeping in view the past performance, and industry's inherent strengths of skilled manpower, innovative technology, increasing industry compliance to international environmental standards, and dedicated support of the allied

industries, the Indian leather industry aims to augment the production, thereby enhance export, and resultantly create additional employment opportunities.

1.13 The leather industry employs 3 million people of which 30 per cent are women. A large part of the production is in the Micro, Small and Medium Enterprises. The industry is bestowed with an affluence of raw materials as India is endowed with 20% of world cattle & buffalo and 11% of world goat & sheep population. Added to this are the strengths of skilled manpower, innovative technology, increasing industry compliance to international environmental standards, and the dedicated support of the allied industries. Besides, the industry is supported by renowned R & D and training institutes like Central Leather Research Institute. There have been many reforms introduced to boost exports- the footwear industry has been de-licensed and de-reserved allowing bigger firms to produce shoes with state of the art machinery. They also have been allowed to expand their production capacity. Most leather exports ($ 5.69 billion in 2018–19) have gone to US and EU in the past.

1.14 The Union Finance Ministry has extended the liberalised benefits under Section 80-JJAA of the Income-tax Act to footwear and leather industry in the Budget 2018–19. Earlier, a weighted deduction of 30% was allowed in addition to normal deduction of 100% in respect of emoluments (additional employee cost) paid to eligible new employees who have been employed for a minimum period of 240 days during the year under Section 80-JJAA of the Income-tax Act. However, now the minimum period of employment is relaxed to 150 days in the case of leather and footwear industry as in the case of apparel industry. This would encourage creation of new employment in this sector. The provisions further rationalized deduction of 30% by allowing benefit for a new employee who is employed for less than the minimum period during the first year but continues to remain employed for the minimum period in subsequent year. These facts have to be certified by a chartered accountant in his accountant's report in Form 10DA (Rule 19AB).

1.15 India is the second largest exporter of leather garments and third largest exporter of Saddlery & Harness in the world. The Indian leather industry accounts for around 12.93 per cent of the world's leather production of hides/ skins. The country ranks second in terms of footwear and leather garments production in the world and accounts for 9 per cent of the world's footwear production. India's leather industry has grown drastically, transforming from a mere raw material supplier to a value-added product exporter.

1.16 In 2018–19, total exports from Leather & Leather Manufactures recorded export value worth US$ 5691.00 million comprising of Raw Hides and Skins, Finished Leather, Leather Goods, Leather Garments, Footwear of Leather, Leather Footwear Component and Saddlery and Harness.

1.17 Top 10 Leather/ Footwear Manufacturing Companies in India.

Bata India Ltd: The company was founded in the year 1894 by Tomas Bata. It is headquartered in Lausanne, Switzerland. Bata India product range includes Footwear, Accessories and Clothing. Besides India, it is serving Africa, Asia, Europe and Latin America. The company is Swiss multinational shoe maker based in Lausanne, Switzerland.

Bhartiya International Ltd: Bhartiya is one of the top exporters of leather apparel. It is serving global clients since 1990. Its production facilities are in Bangalore-Chennai region of South India.

Farida Group: It is one of the top 10 leather manufacturing companies in India. The company is leading manufacturer of good quality men and women footwear and finished leather. It operates into three business segments including

leather, uppers and shoe manufacturing units. The group has various companies which are as follows:

a. Farida Shoes Pvt Ltd
b. Arcot Soles Pvt Ltd
c. Farida Classic Shoes Pvt Ltd
d. Delta Shoes Pvt Ltd
e. Farida Leather Ware Private Limited
f. Farida Prime Tannery
g. India Shoes Exports Private Limited
h. Kenmore Shoes Private Limited
i. Farida Tannery PLC-Ethiopia

Lakhani Armaan Group: The group came into existence in the year 1966 with Lakhani Rubber Works, an automotive components manufacturing company established by Mr K.C. Lakhani.

Now company is involved in the business of manufacturing beach slippers, canvas shoes and sports shoes. The group companies are Lakhani Footwear, Lakhani Rubber Products Pvt Ltd, Lakhani Shoes & Apparels Pvt Ltd, Mascot Footcare etc. It is involved into manufacturing of footwear for men, children and ladies.

Liberty Shoes Ltd: Liberty Shoes was founded in the year 1954 by Dharam Pal Gupta, Purshotam Das Gupta and Rajkumar Bansal by the name of Pal Boot House. It is headquartered in Karnal Haryana. It is one of the top 10 Leather Manufacturing Companies in India.

Mayur Uniquoters Ltd: The company is top manufacturer of artificial leather/ PVC vinyl. Mayur Uniquoters has made its place in 'Forbes Asia Top 200 under $1Bn enterprises' in the Asia Pacific region. Mayur Uniquoters is offering artificial leather for automotive, footwear, furnishing, leather goods & garments.

Metro Shoes Ltd: Metro Shoes Ltd was founded in the year 1947 by Malik Tejani. It has multi-brand footwear retail chain in India. The company is known for its skilled craftsmanship, unmatched quality and high fashion product in the footwear industry. It has network of Metro showrooms in the entire country. It offers huge collection of footwear and accessories.

Mirza International Ltd (Red Tape): The company was started in the year 1979. It is preferred supplier of leather to leading international brands. It is one of the top 10 leather manufacturing companies in India.

Relaxo Footwears Ltd: The company was started in the year 1976 and it is headquartered in New Delhi. It is offering a huge range of fashionable, comfortable, durable and colorful footwear collection for children, women and men.

In 1976, two brothers Mukund Lal Dua & Ramesh Kumar Dua dreamed to take their father's footwear business to what Relaxo is today–one of the leading and most popular footwear companies in India. It has various sub-brands such as Sparx, Bahamas, Flite, Schoolmate and Relaxo Hawaii.

Superhouse Ltd: Superhouse Ltd is multi-unit and multi-product conglomerate. It is leader into the field of footwear manufacturing and exports. The company produces all types of leather goods, quality leather and textile garments.

1.18 Some Facts about Foreign Direct Investment (FDI) in Leather Industry:

i. $193.7 mn FDI in leather sectors, leather goods and pickers during April 2000–March 2019
ii. $54 mn FDI in leather industry in India was received during April 2014-March 2017
iii. 100% FDI inflows to leather and leather goods is allowed under automatic route
iv. Sep 2017: $100 mn Brazilian firm Grupo Priority brings premium shoe brand to India. Grupo Priority has launched its flagship men's shoe brand West Coast in India in a tie-up with the distribution arm of footwear retailer Metro Shoes.

v. Feb 2017: Founder kids footwear brand Teddy Toes aims to make luxurious international designs easily available in India, and at affordable prices.

2. STRUCTURE & PRESENCE OF THE INDUSTRY IN INDIA

The leather industry in India is geographically well diversified, though Tamil Nadu, Uttar Pradesh and West Bengal account for bulk of the output. The major production centres for leather and leather products are located at Chennai, Ambur, Ranipet, Vaniyambadi, Trichy and Dindigul in Tamil Nadu, Kolkatta in West Bengal, Kanpur, Agra and Noida in Uttar Pradesh, Jalandhar in Punjab, Bahadurgarh and Manesar in Haryana, Bengaluru in Karnataka, Delhi, Hyderabad in Andhra Pradesh. The sector is dominated by micro and small units with bigger units accounting for smaller share of the total manufacturing units. Leather industry being predominantly dominated by MSMEs and huge unorganized sector had been impacted by demonetization. Considering the resilience shown by the sector in the wake of judgment of Supreme Court relating to environmental front, the sector is expected to bounce back once again.

3. COLLECTION OF HIDES AND SKINS

3.1 The villagers who are traditionally engaged in this kind of work collect the 'fallen' hides and carry them to the local market for sale. Here, the agents of the commercial firms dealing in hides and skins come regularly. They purchase the hides and supply to the manufacturer. These agents play a crucial role in this trade.

3.2 The other source of hides is the slaughtered stocks. These are managed by professional butchers and hence they are superior in quality. They are produced in towns generally. The number of intermediaries in this case is less. Production is more regular and better organized. A large proportion of slaughtered stock is consumed in the country. Even tanneries situated at a distance have arrangements for buying stock from slaughter houses.

4. FLAYING AND CURING

4.1 Whether slaughtered or naturally dead, the hides and skins are removed from the carcasses. This process is known as flaying. In their raw state, the hides and skins are highly perishable as these are easily liable to putrefaction. As a protection against putrefaction, the raw hides and skins are subjected to the process of curing and tanning to obtain in putrescible leather. Curing in India is mainly done by wet-salting, dry-salting or plaster-curing or by drying.

4.2 Wet: salting of raw hides and skins is adopted for short term preservation of raw hides. It is convenient when the goods are meant for tanning in the country. It consists of the rubbing of salt-common salt and/ or khari salt-on the fleshy side of the hide or skin twice or thrice.

4.3 Dry: salting or plaster-curing is normally employed for goods meant for export. It consists of rubbing the fleshy side with a solution of khari salt and drying. The process is repeated twice or thrice. The final coat of salt is usually mixed with chalk in order to make the flesh appear white and attractive in appearance. Consequently, thick plaster is formed on the flesh of the hide and hence its name "plaster curing".

4.4 Curing by Drying: In this method, curing is ensured by stretching the hides lengthwise on bamboo frames and drying them on those frames. The hides cured in this way are known as framed hides. The dried hides are also known in the trade circles as 'flints'.

5. SOAKING

5.1 Its object is to cleanse by removing the adhering dung, dirt, blood and also to soften the dry-salted and dried hides and skins. In cases of green and wet-salted stock, the soaking usually

consists of washing in two or three changes of water.

5.2 For Dry: salted and dried hides and skins, soaking must be of a fairly long duration. In winter it requires at least 48 hours and in summer from 24 to 36 hours to get the stock properly soaked. Water alone does not make dry hides and skins sufficiently soft, hence chemicals like caustic soda or sodium sulphide are added.

6. LIMING

6.1 Well soaked hides are now limed. The object of liming is four fold-removal of hair, swelling and plumbing of the pelt, saponification of the natural grease and solution of some inter-fibrillary matter or cementing substance.

6.2 All these are essential for satisfactory tannage.

6.3 The process consists mainly of the immersion of hides and skins in a milk of lime, called lime liquor. This process takes six to twelve days in once-used, twice-used or fresh lime liquor depending on the nature of the end product.

6.4 The usual procedure is to put hides for the first few days in old lime for loosening the hair and dissolving the cementing substance and then shift them to newer limes for plumping up and swelling. A good practical system is to use a set of three pits containing-old (twice used) lime; medium (once used) lime; and fresh lime. Hides are kept in each of these for a number of days, usually two to four, so that the liming is generally complete in 6 to 12 days. But both the total duration of liming and the treatment in different limes are varied according to the class or leather under manufacture and the qualities desired in the final product.

7. DELIMING

7.1 After liming, the hides have to be delimed. The object of deliming is not only to remove the lime from the pelt but, with certain classes of hides and skins, also to dissolve some protein matter of the grain surface and the yellow elastic fibres to make the final leather smooth on the surface and stretchy, to loosen the lime soap formed during liming and the dirt and to bring down the swelling of hides and skins. For stiffer varieties of leather such as sole, harness and belting, a partial removal of the lime is all that is necessary.

7.2 For leathers which have to be soft, pliable, and more or less stretchy all the four objects of deliming must be fulfilled and this cannot be achieved by any chemical deliming agent. Bacterial action is necessary and from times immemorial fermented infusions of hen and pigeon dung or of dog dung have been used for this purpose.

8. PICKLING

When intended for chrome tanning, the delimed pelt is usually pickled. Pickling means treating the pelt for a short time in a bath of sulphuric acid and salt to which some alum is added. The object is to impart a sort of preliminary tannage and to bring the pelt into an acid condition. Hides and skins meant for vegetable tannage are not usually pickled.

9. TANNING

9.1 There are two main processes of tanning-vegetable and chrome. Broadly, most of the thicker and coarser varieties of leather, such as sole, harness and belting are made by the former while the finer varieties like leathers for boot and shoe uppers are made by the latter process. Alum, formaldehyde and oil process of tanning are of comparatively limited application. The first two are used for making white, and the third for making chamois leather. A combined formaldehyde and oil tannage is also used nowadays for making chamois leather.

9.2 In vegetable or bark tanning delimed hides and skins, technically called the 'prepared pelt' are treated in an infusion of tannin, containing

vegetable matter. Chrome-tanning is a comparatively modern invention. In this method tanning is done by a basic chrome salt. There are two processes of chrome tanning-the single bath, and the double bath.

9.3 The main advantage of chrome-tanning over the vegetable process is the speed of the former. Chrome does in hours what vegetable-tanning takes months to do. The final product too, In case of shoe upper-leather at any rate, is very satisfactory when tanned with chrome. Hence, cow hides, calf skins and goat and sheep skins are nowadays chrome-tanned for manufacture of this class of leather.

10. FINISHING OF LEATHER

10.1 After tanning, all classes of leather, whether vegetable or chrome-tanned have to be finished to make them suitable for the purpose for which they will be ultimately used. With the exception of sole leather, finishing consists of

i. Dyeing or colouring, treating leather with grease (for softening and

ii. Waterproofing-technically called carrying) polishing or glazing.

10.2 But the finish imparted to a leather is peculiar to it, that no two varieties are finished in the same way.

10.3 Finishing of vegetable-tanned leather-Sole leather, which is usually vegetable-tanned is neither dyed, nor glazed, its finishing consists of setting it out well to make it flat and smooth on the surface and pressing heavily to make it stiff, tough and water resistant. Belting, harness and saddlery leathers are shaved to required substance and treated with grease to increase their tensile strength and water resistance and to make them pliable and well set-out. Harness and saddlery leather is occasionally dyed into brown and black shades. Vegetable-tanned shoe upper leather is shaved to substance and often dyed and well curried and some also glazed, while vegetable-tanned morocco and bookbinding leathers (made from goat and sheep skins) are lightly shaved and dyed into various shades of colour, oiled up, dried out, glazed and either embossed or boared to produce characteristic gains.

10.4 Finishing of Chrome Leather: This is more elaborate than that of the vegetable-tanned leather. It chiefly involves the following operations:

i. Shaving to make the leather thin and uniform in substance, usually done by machine.

ii. Neutralising and washing to free the leather from acid and soluble matters.

iii. Dyeing.

iv. Fat-liquoring, corresponding to make the leather soft.

v. Drying.

vi. Staking to soften the leather mechanically (done by machine).

vii. Glazing, to make the leather glossy and bright (done by machine.)

11. TAX INVESTIGATION

11.1 Accounting

11.1.1 Like in any other business, in this trade also books of account like cash book, ledger and journal are maintained. Apart from the usual vouchers and invoices, job card for each process, whether it is tanning or making of finished goods is maintained showing the weight/ area of the leather. These job cards are at the maximum kept for six months and thereafter destroyed. These job cards are important pieces of information for valuing the stock.

11.1.2 Accountancy packages like Tally or Profit, SAP and ERP on cloud are prevalent in this trade. There is no common software in the market for the technical functions in this business. However, in some places for better control of the

products indigenously developed software are used as product management programs.

11.2 Costing and Yield Rate Analysis: The Commerce Ministry makes a study of the industry and from time to time, and fixes up the STANDARD INPUT AND OUTPUT NORMS (SIONs) in consultation with Central Leather Research Institute, Chennai (CLRI), and Council of Leather Exports (CLE). The latest norms for cow and buffalo hides and other relevant statistics are in Annexure-I, and II.

11.2.1 SION—*Standard Input Output Norms* or SION: In short is standard norms which define the amount of input/ inputs required to manufacture unit of output for export purpose. Input output norms are applicable for the products such as electronics, *engineering, chemical, food products including fish and marine products, handicraft, plastic and leather products etc.* SION is notified by DGFT in the Handbook (Vol. 2), 2002–07 and is approved by its Boards of Directors. An application for modification of existing Standard Input-Output norms may be filed by manufacturer exporter and merchant-exporter. The *Directorate General of Foreign Trade (DGFT)* from time to time issue notifications for fixation or addition of SION for different export products. Fixation of Standard Input Output Norms facilitates issues of Advance License to the exporters of the items without any need for referring the same to the *Headquarter office of DGFT* on repeat basis.

11.2.2 Basics Requirements of Standard Input Output Norms For fixation/ modification of Standard Input Output Norms (SION) following details are required:

i. Technical Details of the export product as per the details given in Appendix 33.

ii. Chartered Engineer certificate certifying the import requirements of raw materials in the format given in Appendix 32B.

iii. Production and Consumption data of the manufacturer/ supporting manufacturer of the preceding three licensing years as given in serial no 3 of sub Section XII, duly certified by the Chartered accountant/ Cost & Works Accountant/ Jurisdictional *Excise/ GST Authority.*

11.3 The commission agents are the king-pin of the system of collection of raw skins and hides and their role should be thoroughly scrutinised. The probability of commission agents carrying on their own business in the guise of the commission agency and thus keeping their profits out of tax net cannot be entirely ruled out. The AO must be fully aware of this aspect. Cash credits specially, on the occasion of festival sales should be very carefully scrutinised.

11.4 Inflation of purchases is very common in this trade and it is difficult to pin down the assessee on this. Purchases are made through bought notes prepared by the assessee themselves, that too in cash. Since cash transaction is permitted by law (Rule 6DD) for this line of business, verification becomes difficult. Bought notes should contain the signature and the address of the seller. In most of the cases only thumb impression are available with no addresses. In such situations though the conclusion will be obvious, inference should be drawn only after insisting on the identity of the seller. Intra-firm and inter-firm comparisons and spot enquiries will help.

11.5 Most of the purchases are cash purchases. Hence, it is easy to inflate them. The assessees usually take shelter from the operation of Section 40A(3) by claiming that their case is covered by the exception in Rule 6DD(e). The benefit of this exception is available only where the purchases are made from butchers directly. If the purchases are from middlemen, which is normally the case, the benefit is not available. The disallowance under Section 40A(3) should survive the test of appeal. However, the AO should not stop with proving cash payment but examine the genuineness of the purchase itself. Low GP rates are generally indicative of bogus purchases.

11.6 As this industry is dominated by MSMEs, sales suppression is rampant. Quantity tally and data analytics like percentage of yield can be of some help in finding out suppression. When local sales are suppressed, turnover for sales tax is also suppressed. In suspected cases of suppression of sales, reference to sales tax assessment orders may help. If the quantitative tally is not provided or the percentage of yield is abnormal, sales suppression can be inferred.

11.7 Suppression of sales of by-products is common. A variety of wastes and by-products are derived in this business. Their sale is not reported. With progressive improvements in leather technology, the leather 'wastes' have found new uses with considerable revenue implications. It is imperative that the AO keeps himself abreast of technological changes and ensures that additional revenue is brought to tax. Marketable by-products of leather industry are:

i. Waste lime sludge from tanneries-used as construction material.

ii. Goat hair and sheep wool in belt and spinning industry-used in manufacture of carpets, rugs etc.

iii. Pig-hair-used in brush making industry.

iv. Leather Shavings and cutting and leather splits used for manufacture of leather boards.

v. Nitrogen-produced from vegetable tanned leather waste.

vi. Insoles and middle soles, fancy leather goods manufactured from chrome shavings.

vii. Chrome shavings are also used as a substitute for cork and cardboard box manufacture.

viii. Use of vegetable tanned leather waste for the manufacture of heel stiffener materials.

ix. Spent bark as fuel.

x. Spent chrome liquors are regenerated and used back in tanning.

xi. Utilisation of leather shavings in preparation of chrome liquors.

11.7.1 The AO should check whether the by-products are duly accounted for and the income arising from their disposal is offered for tax

11.8 The industry is labour-intensive. To avoid payment of PF, ESI and other payments, the manufacturers go for labour contracts. As contract labour is not permanent, payment of the above benefits to it does not usually arise. This apart, tanneries pose serious health hazards. Working conditions are unhygienic. Employees do not stick to an establishment for long. Unscrupulous manufacturers take advantage of this and inflate their claims of expenditure. They even fabricate registers for payment of wages and bonus with some names and thumb impressions not capable of verification. Here, spot inspections and surveys may help. Further, payments made to labour contractors attract the provisions of Section 194C and TDS is liable to be deducted on such payments. Non-deduction of TDS is prevalent in this sector, since the small time labour contractors are generally reluctant to provide their PAN, which is mandatory for deduction of tax at source. In that case, Section 206AA may be invoked by the deductor(s). Non-deduction of tax on such expenditure is liable to disallowed as per the provisions of Section 40(a)(ia) of the Income-tax Act. In this line of business, commission is generally paid to acquire orders from purchasers abroad. The commission paid to such brokers/ agents are guised in the form of business promotion expenses, which also attracts deduction of TDS. Once TDS is deducted on such payments, the income of the broker/ agent has to be necessarily disclosed to the department and is also brought to tax.

11.9 Inflation of inputs is not unusual in this line of trade. Standard input norms are given in Annexure to help in the assessment. Some inputs like wattle extracts which are mostly

imported are sold outside books but are shown as consumption. This point can be easily verified by applying the standard norms.

11.10 The most common kind of suppression prevalent in this trade is the under-valuation of closing stock. There are many varieties of raw skin. There are many varieties of tanned goods at different stages. Even in finished goods there are goods of different quality and goods of different weight and with different measurement. Since valuation of these items is highly technical and does not yield to any particular standard, assessees take advantage of this and cook up figures of closing stock to suit them. Primary records based on which the valuation is done are generally destroyed within six months from the end of the accounting year, therefore verification of the valuation of closing stock will be a problem unless scrutiny of the return is taken up immediately after its filing. It is advisable to collect inventory of closing stock every year in the first week of April which at least will pre-empt any manipulation of the stock.

11.11 The industry is highly polluting. Supreme Court decision has obliged the tanneries to setup their own pollution control mechanisms. The expenditure on setting up such mechanisms may be overstated or sometimes claimed as revenue expenditure. Modernisation of the industry is on with active support of the State. Capital expenditure incurred on these scores may sometimes be claimed as revenue.

12. CASE STUDIES

12.1 The case of an assessee owning a tannery, and supplying wet blue leather to other manufacturers of leather goods was taken up for scrutiny. The AO routinely called for the books and the vouchers and asked the Inspector to test-check one or two bills by making spot enquiries. The Inspector selected four vouchers of purchase of raw hides for local enquiries. It turned out that they were bogus. On detailed enquiry, it turned out that the bought-notes were fabricated indicating much higher prices than what was actually paid. Inflation of expenditure was admitted by the assessee in that year.

12.2 In the case of a firm, purchases of hides were shown as Rs. 28.80 lakh. The GP rate worked out to 5.69% as against 12.6% of the earlier year. The AO noticed that considerable amount of purchases were recorded from two parties-'A' and 'B'. The payments to them were made by bearer cheques. These cheques were found to have been encashed, not by 'A' or 'B', but by certain other persons. On enquiry it was found out that 'A' was a scooter mechanic and 'B', a tea shop owner. It turned out that the alleged purchases from them were never made. The addition of inflation in purchases was upheld in appeals.

12.3 An assessee owning several tanneries engaged in manufacture of leather goods like wallets, belts and garments. During scrutiny when the case came up for hearing the AO asked for details of valuation of the closing stock. In these, 5082 sq. ft. of tanned leather was shown as "stock in transfer given for processing". This aroused the AO's suspicion. The assessee claimed that the leather was given to another processing unit for further tanning as the required process was not available with the assessee. It gave the name and address of the processor. In the meantime the assessee filed a revised return for the subsequent assessment year reducing the income and claiming more opening stock of tanned leather to the extent of 5082 sq. ft. The processor confirmed having received the leather and returned it in the next year. However, except for the confirmation letter, there was no corroboration in the form of any entry in the stock register or debiting of processing charges, loading and unloading charges, etc. The person in charge of the processing unit was summoned and questioned in depth. During enquiry it came to light that sale proceeds of 5082 sq. ft. leather were sought to be covered up by the plea of transfer of stock. Prosecution was launched against the assessee for this suppression.

12.4 In yet another assessee's case, during the assessment proceedings, the AO visited the assessee's tannery. He noticed that the assessee organised its work economically and its labour and chemicals costs were minimal. It had a system of maintaining job cards for each lot of leather getting processed at different stages. It also had a system for valuing the stock. After studying these systems, the AO called for the details of labour charges, chemicals consumption and valuation of closing stock. It was found out that the labour charges had been inflated to the extent of almost double. Besides, there were no basic records to substantiate the valuation of closing stock. Immediately after the close of the accounting year the AO visited the assesse's premises and collected the details of actual stock as on 31 March. Though this pre-empted the assessee from suppressing the closing stock for that year, it could not help the AO in ascertaining the correct closing stock for preceding assessment year. The inflation in labour charges was, however, brought to tax.

B. FOOTWEAR INDUSTRY

13. INTRODUCTION

13.1 Indian footwear market, like its international counterpart, can broadly be classified into men, women and kids. Indian footwear segment is dominated by men footwear, which accounts for 60% of the industry while women and kids footwear contribute 30% and 10%, respectively. India is the second-largest producer of footwear globally after China, where India currently accounts for approx. 9% of total global shoe production. Global volume of footwear stands at 22 bn pairs per year of which approx. 2.1 bn are produced in India. 90% of the footwear produced in India is consumed within the country while the rest 10% is exported primarily to European markets such as the UK, Germany, Italy and France and some shipped to North America. Indian footwear industry is dominated by unorganised players who account for approx. 70% of the total industry. Thus on an annual basis, out of approx. 2.1 bn pairs of footwear manufactured, approx. 1.5 bn pairs are manufactured by small unorganised manufacturers and the rest approx. 0.6 bn pairs are made by organised players such as Bata, Relaxo Footwear, Metro Shoes, Liberty, Action, Khadims, Paragon, Nike, Puma etc. There are overall approx. 15000 units involved in the manufacturing of shoes in India with approx. 55% of volume coming from small players and rest by large manufacturer where overall sales is above Rs. 15 mn annually. Thus, total footwear industry is currently pegged at Rs.336 bn translating into realisation of Rs.160/ pair. Out of total pair consumed in India about 840 mn is consumed by top 20 cities, thus accounting for urban region average realisation of Rs.240/ pair and in rural areas at Rs.100/ pair.

13.2 India along with China is expected to be the fore bearers of growth in the next few decades and would thus be one of the largest consumers. This has prompted many international players to setup base in these countries and tap the latent demand. Pavers England has already made its presence felt, having setup shop. Many others are expected to arrive within a short span of time. India produces close to 2.06 bn pairs of footwear including leather shoes (909 mn pairs), leather shoe uppers (100 mn pairs) and non-leather footwear (1,056 mn pairs).The major production Centres in India are Tamil Nadu, Uttar Pradesh, Punjab and Delhi. Apart from these hubs there are hordes of small centres that act as suppliers for the fast growing footwear industry.

13.3 Footwear manufacture is a labour intensive industry. The industry has undergone structural changes in last two decades. These have been occasioned by migration of artisans from rural areas to urban centres in search of employment. Numerous household units have come up in urban centres like Agra, Kanpur, Kolkata, Mumbai, Jaipur, Jalandhar, Ahmedabad, Delhi and Chennai.

13.4 The industry employs 1.1 mn people, both directly and indirectly. Majority of these people are from the weaker Sections of the society of them, only 20% are in the organized sector, of which 40% are female workers. The remaining 80% of the workforce comprises of rural artisans, cottage and household units. With improvement in the manufacturing facilities more and more people will be part of the organised sector resulting in better working environment for the workers.

13.5 The footwear produced can be classified into three kinds, *viz.* full leather, mixed leather and non-leather. Leather footwear for this purpose is one where all its components (barring the sole) are made from leather. There is another classification of footwear-Gents', ladies', and children's footwear. Footwear sales depend on seasons. January and February are usually lean months. The peak seasons are the spring and the summer.

14. STAGES OF MANUFACTURE

14.1 Shoe manufacturing involves following stages:

i. Design development.
ii. Upper cutting/ clicking.
iii. Upper preparation.
iv. Upper closing.
v. Assembly.
vi. Lasting.
vii. Sole attaching, finishing.
viii. Packing.

14.2 Design Development: Designing of a shoe requires a sketch. A proper shoe last is selected or designed and fabricated. This sketch is transferred on to a paper pasted to the contours of the last. Patterns of different components of the shoe are cut, tolerances are given wherever required and final patterns are cut. These patterns are graded on a machine called 'pattern grading machine' (mechanical or computer-aided design), for different sizes and fittings of the shoe.

14.3 The upper leather is sorted and dispatched to the clicking Section. In upper clicking Section, the various components of uppers are cut both manually (hand operation) and mechanically. The clicking skill and the speed of the operator, maximum utilisation and minimum wastage of material contribute to the efficiency of the operation.

14.4 Upper Closing: The components are skived for reducing the thickness at the ends of the upper using the upper skiving machine. Thermoplastic toe puffs and stiffeners are skived on heavy duty machines. Edges of upper are cemented and folded. The upper components are joined and stitched on sewing machines that vary according to the need. A flat bed machine is used on a flat surface. A post bed machine with a small working area, allows easier fitting and stitching on partially closed uppers. On a cylinder machine closed upper could be moved freely around the working area. The eyelets are attached on punching and eyeletting machine.

14.5 Assembly Section: Toe puff is attached onto the toe portion on toe puff attaching machine. Thermoplastic stiffener is attached on the counter moulding machine.

14.6 Lasting Section: Insoles are attached on the last bottom on insole attaching machine. The fore part or the upper is steam-conditioned to make it soft and pliable for lasting on fore part conditioning machine. The upper is kept over the last. The fore portion is pulled and attached to the insole. In both fore lasting and side lasting, neoprene-based adhesive is used. The heel/ seat portion of the shoe is also lasted. The lasted margin of the upper is completely attached to the insole on the last.

14.7 Marking: The shoe is pounded using vibrating hammers. The lasted margin of the upper is roughed until the fibres are exposed on lasted upper roughing machine. The shoe is passed through the 'humid and heat setting'

chamber. Here, the shoe is set to the shape of the last and when the last is removed the upper should retain its shape.

14.8 Bottom Filler: A mixture of rubberised cork and felt is filled in between the lasted margin of shoe. Neoprene based cement is applied to the roughed surface of the upper. The leather soles are roughened and neoprene adhesive applied. Thermo plastic soles (TPR) are halogenated, polyurethane cement applied and dried. The bottoms of the upper and the outsole are exposed to an infrared lamp on adhesive reactivating chamber. The sole is kept in position of the lasted upper and is pressed under pressure on sole attached press. Sole stitching to the upper depends on the design and style of the construction.

14.9 Finishing: The shoes are cleaned using cleaner, repaired for any minor damages by repairer/ filler and sprayed by a finish. The shoe is polished by a suitable wax finish. Then it is attached, cleaned, inspected and put in the carton.

15. PRODUCTION RECORDS

15.1 In the uppers division and the leather goods division, production records are maintained at various stages of production according to the flow of materials.

15.2 Stores-The following records are kept in the store:

i. Gate pass-Gate pass is prepared for all materials received in stores.

ii. Stock register-Individual stock registers are maintained for each of these items.

iii. Leather.

iv. consumable stores (lining, hooks, eyelets, threads, button etc.)

v. general stores-machine parts and other items not directly consumed in stores.

15.2.1 The issues from the store are made against the requirement received for leather on clicking cards and for other items requisition slips.

15.3 Clicking cards are prepared for each and every clicker with details of style order, quantity of finished goods the requirement of various finished leather to be issued to clicker. The stores department makes the issue to the individual clicker on receipt of the clicking card. After completion of the job, the clicker submits the clicked components along with the card to the in-charge of clicking department. The gain/ loss of leather in clicking is calculated on the card-itself to note the efficiency of the clicking person and control the consumption of finished leather. In cases of piece-raters the wages are paid on the basis of clicking cards.

15.4 A similar method is adopted in skiving for controlling the production and clearing the payment of wages to piece workers. In closing Section also a production register with the control number of job orders (closing cards) is maintained on the same lines.

15.5 In the packing Section an order style wise record for finished uppers is maintained. In dispatch Section the material is dispatched to the customer according to the order delivery schedule. Challan and packing list invoice are prepared immediately on dispatch of materials.

16. COSTING RECORDS

In a typical footwear division the following costing records are usually maintained:

i. Cost sheets.

ii. Profitability statement.

iii. Statement showing cost of production.

iv. Statement showing the cost of sales.

v. Statement showing cost of sales, sales realisation, and margin.

vi. Statement showing cost of rubber sole.

vii. Statement showing conversion cost for various cost centres

viii. Statement showing apportionment of conversion cost to various product

ix. Statement showing cost of power generated, purchase and consumed.

17. TAX INVESTIGATIONS

17.1 The leather industry in India is concentrated in a few specific areas. It is carried on by a closely knit group of individuals. Consequently, the business methods adopted by them are shrouded in a certain measure of secrecy which has made tax evasion possible on a significant scale. The nature of the business being such, very little investigation had been done in the past into the manufacturing process and other operations.

17.2 Mostly, tanning and manufacture of footwear and other leather goods produced are intertwined. The tanners of leather are also into the business of leather goods manufacture, maybe in separate units, but nevertheless in closely connected operations. Consequently, evasion or posting of expenses commence from the time when the raw hides are purchased. Without going into the process of tanning it may be mentioned that the manufacturers make it difficult for linking raw hide consumption and manufacture of footwear/ leather goods by weighing different measures at different stages. For example, at the time of purchase of raw and unprocessed hides, these are bought in kilos/ tonnes. Once the hide undergoes tanning process, the mode of measurement changes to decimetre, thus making it difficult to establish any linkage between the raw hide processed and the end product in the form of footwear/ leather goods.

17.3 The AO should examine the purchases for their genuineness. Considering the small units with which the manufacturer deals, there is considerable scope for inflation of purchases. Whether all purchased items have been accounted for in terms of sales and stock, a quantitative tally will help. Indian sales can be cross-checked by reference to the account copies of the major buyers. Export rejections are disposed of locally. The AO should look into this aspect and satisfy himself about a correct recording of the rejection sales.

17.4 When the raw hide is spliced, the thinner portions are used for the uppers and for manufacture of shoes etc. Thicker portions which are generally not accounted for are used in the manufacture of sole, leather-bags etc. It is for this reason that most of the footwear industries show export of shoe uppers but do not disclose the sale or use of thicker leather coming out of the splitting.

17.5 In any case, the entire transaction from the stage of purchase of unprocessed hide till the sale of footwear to local industries is shown in cash. A tanner, for example, buys all his raw hides through agents in one of the mandis (e.g. industries at Kanpur make purchases mainly from Kanpur, Agra and Khurja). The raw hides thus purchased are sent for processing and the manufacturer has total flexibility in showing the end products of processed hides and keep the rest outside books for manufacture and sale of footwear and leather goods outside books. Therefore, an enquiry has to commence from the Mandi stage where wholesalers have to be examined to see what they are accounting for in their books.

17.6 Similarly, the processing has to be observed for some time to understand the output that comes out of the processed hides since these are measured in decimetre. Unless the processing is observed, it will not be possible for the AO to determine how much shoe uppers or shoes can be manufactured out of one hide and further he will not be in a position to determine the economic benefit of the thicker leather which is also used for production purposes.

18. ENQUIRIES IN CASES OF EXPORTERS

18.1 Against exports the exporters get various incentives like duty drawbacks and import licenses. Accounting of these incentives assume importance. The AO should ensure that the incentives are properly accounted for and have entered the income computation. Realisation/ repatriation of export sale proceeds is also an area to be checked. The reasons for non-repatriation should be closely scrutinised. Yet another area in export cases is quality claims/ cancellation orders. Examination of the correspondence and reaching proper conclusion is necessary while dealing with this aspect.

18.2 Inflating export invoices is "a *tempting mode* of avoiding GST, according to Neelkanth Mishra, the India equity strategist at Credit Suisse Group AG. By showing more of their sales as exports, manufacturers can claim bigger tax credits.

18.3 There are prescribed Standard Input Output Norms (SION) for this industry and the same is enlisted here in under:

Table 3

G01	All type Leather garments including coats/ jackets having consumption of finished leather above 25 Sq.ft.
G02	All type Leather garments including coats/ jackets having consumption of finished leather of 25 sq.ft. and below
G03	Children Leather Shoes
G04	Children Rubber and Canvas footwear with rolled soles
G05	Children Rubber and Canvas shoe with moulded sole
G06	Fine/ Fancy Leather Gloves
G07	Finished Leather from Hide of Cow/ Buffalo
G08	Gents Leather Half Boot Uppers
G09	Gents Leather Half Boots
G10	Gents Leather Long Boots/ Gents Leather Long Boot Lasted Uppers
G11	Gents Leather Sandal Upper
G12	Gents Leather sandals with P.U Sole/ Rubber Sole/ PVC Sole
G13	Gents Leather Shoe Uppers(Stitched/ unstitched)
G14	Gents Leather Shoes
G15	Gents Long Boot Uppers (upto Knee)
G16	Gents Rubber and Canvas footwear with rolled soles
G17	Gents Rubber and Canvas shoes with moulded sole
G18	Leather-Cum-Synthetic Golf Gloves/ Synthetic Golf Gloves with Leather
G19	Industrial Hand Gloves (Large size) (Based on consumption of Gloving leather hide/ splits 42cm in length, 4.70 sq.ft)
G20	Industrial Hand Gloves (Medium size) (Based on consumption of Gloving leather hide/ splits 36cm in length, 3.60 sq.ft)

G21	Industrial Hand Gloves (Small size) (Based on consumption of Gloving leather hide/ splits 26cm in length, 3.00 sq.ft)
G22	Ladies Closed Leather shoe uppers
G23	Ladies Leather Half Boot
G24	Ladies Leather Half Boot Uppers
G25	Ladies Leather Long Boot
G26	Ladies Leather sandals with PU Sole/ Rubber Sole/ PVC sole
G27	Ladies Leather Sandals Upper
G28	Ladies Leather Shoes
G29	Ladies Long Boot Uppers (Upto knee)
G30	Ladies Rubber and Canvas footwear with rolled soles
G31	Ladies Rubber and Canvas shoes with moulded sole
G32	Laminated leather Split/ Crust laminated with polyurethene Foil
G33	Leather Bags, All Sorts(like Handbags, Shoulder Bags, Shopping Bags, Portfolio, Travel Bags, School Bags, Ladies Bags, Men's Bags, Briefcases, Attache Cases, Pouch Bags, Clutch Bags, Evening Bags Rucksacs, Ladle folios, Belts, Bags etc.)
G34	Leather Board Counter for Shoes
G35	Leather Golf Gloves
G36	Leather Portfolio based on consumption of Leather hide/ skin 012.0 sq ft., Size 17
G37	Leather Sanddlery Goods Harness: Saddle Sets-14
G38	Leather Waist belt (Based on consumption of Leather hide/ skin 01.0 sq ft Size 30
G39	Leather Wallets, Purses, Key cases, Card holders, coil purses, Billfolds, Spects cases, Toilet cases, Passport Covers, Cigarette cases, Lipstick cases, Cosmetic cases, Manicure cases, Pen cases, Memo cases, Cheque Book Covers, Ring Binder Bookcovers, Tie cases, vanity cases, Desk Top sets, camera ca
G40	Leather welt work shoes
G41	Sports shoes with leather upper & PVC sole
G42	Sports shoes with leather upper and moulded sole
G43	Gents & Boys Leather Chappals, Slippers with Leather Sole or Synthetic Sole
G44	Ladies & Girls Leather Chappals, Slippers & Sandals with Leather Sole and Synthetic Sole
G45	Gents Leather Half Boot Lasted Upper with insole
G46	Finished Leather from Skin of Goat/ Sheep/ Calf
G47	Finished Leather Sofa Cover (Stitched)
G48	Leather Carpet

18.3.1 The DGFT has notified revised Standard Input Output Norms (SIONs) No. G7 and G46 in its public notice dated 23rd October, 2013. The same is annexed at the end of this chapter.

19. CONCLUSION

This industry is large, growing and has all the potential to impact Indian Economy. Due to nature of its products, cash purchases of hide and skin, the AO is advised to follow the SIONs notified by the DGFT. GST, rolled out in the year 2017, has positive impact to curb underreporting and misreporting practices or inflation of expenses. Sharing data on input materials may help the Assessing Officers in their verification. In this regard, the AOs should take note that GST rate for footwear upto Rs. 1,000/- has been reduced to 5%, while those above this value shall attract the GST Rate of 18%. This variation in rate may lure the assessee to reclassify its goods/ finished products so as to bring them to the lower slab of GST rate. This should be verified by the AO by calling for assessee's production register, stock register, GST invoices etc.

PUBLIC NOTICE NO. 32(RE:2013)/2009–2014

NEW DELHI, DATED THE 23rd OCTOBER, 2013

In exercise of the powers conferred under Paragraph 2.4 of the Foreign Trade Policy, 2009–2014 and Paragraph 1.1 of Handbook of Procedures (Vol. 1), the Director General of Foreign Trade hereby makes the following amendment/ modifications in the Handbook of Procedures, Vol. II (SION Book):

2. The entries No. G-7 and G-46 of Leather and Leather Product in the Standard Input Output Norms (SION) are revised as per **Annex-I** and **Annex-II** respectively.

3. Effect of Public Notice

In SIONs at entry G-7 and G-46 certain input items have been amended/ changed. These are in the nature of (a) deletion, (b) change in the description, and (c) technical specification detailed. No changes have been made either in description of concerned export product or in the permissible quantity of relevant inputs (in some cases, input has been deleted).

Sd/-

(Anup K. Pujari)
Director General of Foreign Trade
E-mail: dgft@nic.in
(F.No.01/84/162/037/AM-14/DES-V)

ANNEXURE-I

Revised Standard Input Output Norms (SION) G-7.

G7	**Finished Leather from Hide of Cow/ Buffalo**	**1000 Sq. Ft.**	1		Preservative (as per Sl. No. 3 of General Note for Leather & Leather Products)	2 Kg
			2		Wetting Agent	10 Kg
			3		Soaking Enzyme (other than used in Food Processing Industry)	5 Kg
			4		Unhairing Agent:	
				a)	Sodium Sulphide	5 Kg
				b)	Sulfohydrate	5 Kg
			5		Leather Liming Auxiliaries	2.5 Kg
			6		Deliming Agent	10 Kg
			7		Bating Agent (other than Potassium Carbonate)	5 Kg
			8		Leather Degreasing Agent (Fatty Alcohol/ Esters Fatty Acid Derivatives)	5 Kg
			9		Bleaching Agents (Sodium Bisulfite/ Hydrogen Peroxide/ Sodium Chlorite/ Potassium Per-Manganate)	2.50 Kg
			10		Formic Acid	10 Kg
			11		Acetic Acid	5 Kg
			12		Chrome Tanning Agent:	Deleted
				a)	For Full Chrome Tanned Leather (i) Chrome Tanning Agent/ Relevant Reducing Agent/ Masking Agent (ii) Vegetable Tanning agent such as Wattle or Mimosa/ Quebracho and Supplementary Vegetable Tanning agents such as Chestnut/ Tara/ Sumac/ Re-tanning agent such as Cutch.	50 Kg 20 Kg
				b)	For Vegetable Tanned Leather Main vegetable tanning agents such as Wattle or Mimosa/ Quebracho, Re-tanning agents such as Cutch and supplementary Vegetable Tanning agents such Chestnut/ Tara/ Sumac subject to the condition that Supplementary Tanning Agents shall be allowed a maximum of 30 Kg (Betal nut/ Areca nut is not allowed)	150 Kg
				c)	For Vegetable-Chrome Combination Tanned Leather (Semi-Chrome tanned Leather)	
					(i) Vegetable Tanning Agent such as Wattle or Mimosa/ Quebracho, Re-tanning agents such as Cutch and supplementary Vegetable Tanning agents such Chestnut/ Tara/ Sumac subject to the condition that Supplementary Tanning Agents shall be allowed a maximum of 30 Kg.	150 Kg

					(ii) Chrome Tanning Agent/ Relevant Reducing Agent/ Masking Agent	22 Kg
			13		Zirconium Tanning Salt	10 Kg
			14		Sodium Formate/ Acetate	8 Kg
			15		Sodium Bicarbonate	8 Kg
			16		Soda Ash	4 Kg
			17		Magnesium Oxide	5 Kg
			18		Syatan (only synthesized chemical products but not pure chemicals)	54 Kg
			19		Oxalic Acid	2.50 Kg
			20		Deleted	Deleted
			21		Fatliquors	24 Kg
			22		Dye Levelling Agent	2 Kg
			23		Dyes (Acid dyes/ Direct dyes/ Premetallised dyes/ Basic Dyes/ Reactive dyes/ Sulphur dyes) other than those of exclusively used in textile processing	12 Kg (Out of the total quantity of 12 Kg, the quantity of Reactive dyes shall not exceed 0.6 Kg and subject to the General Note 6 of Leather & Leather Product)
			24		Dispersing Agent (formulated products) excluding Nonylphenol	5 Kg
			25		Cationic Dye Fixative	5 Kg
			26		Polyurathane Resin	20 Kg
			27		Penetrating Agent (As per Sl. No.3 of General Note for Leather & Leather Product)	4 Kg
			28		Pigments other than those used exclusively in ceramic colours, cuprous oxide and aluminium oxide	10 Kg
			29	a)	Binders other than those indicated below	10 Kg
				b)	Casein based Binders OR	5 Kg
					Resin/ Polyurathane based binders	10 Kg
			30		Liquid Dyes (Based on Acid dyes/ Basic dyes/ Metal complex dyes/ Liquid Colouring Agents)	10 ltrs
			31		Feel Modifiers	1 Kg
			32		Lacquer Emulsion	10 Kg
			33		Slipagents (Silicon based Oil)	1 Kg
			34		Fixing Agents/ Cross Linkers (Formaldehyde free)	1 Kg
			35		Wax Emulsion (only ready to use formulated products; raw materials for wax emulsion is not permitted)	2 Kg
			36		Oil/ Wax for pull up Finish (edible oils are not permitted)	25 Kg

			37		Fillers for Leather Industry (Hydrophilic fumed silica not allowed)	3 Kg
			38		Spl. Auxiliaries for Stain/ Fire/ Grease/ Water/ Alkali/ Acid/ Oil Resistance	5 Kg
			39		Pearlised Pigment and Powder (Bronze powder is not allowed)	1 Kg
			40		Fluorescent Pigment	4 Kg
			41		Special Lacquer for Brush off/ Two tone	10 Kg
			42		*Transfer foil (Polyester/ Polyurethane Metalised film-Silver/ Gold/ Bronze/ Mat/ Plain/ Two Tone effect/ Glazy/ Nubuck effect/ Pull up effect/ Suede effect/ Floral and other design effects)	120 sq. Mtrs.
					Note: *This item will be allowed only for laminated finished leather using the above Transfer Foil/ Film.	
			43		Miscellaneous Items:	
					a) Knife Blades/ Band Knives: Splitting Band Knife/ Fleshing Knife/ Shaving Knife used only in leather industry	
					b) Grinding wheels for Splitting Machine/ Fleshing Machine/ Shaving Machine used only in leather industry	upto 5% of FOB value of export, out of which value of each of the items at (e), (g) & (h) shall not exceed 5% of the overall CIF value of miscellaneous items permitted for import.
					c) Felt/ Felt Sleeves Samming Machine/ Setting cum Samming/ Polishing Felt Roller	
					d) Stones: Polishing Stone Roller/ wet Buffing Stone Roller	
					e) Emery Paper: Roll of 50 Metre Length	
					f) Glazing Glass in cylindrical shape only	
					g) Padding Mohair cloth	
					h) Embossing plate	

Note: In case of export of Suede and Nubuck leather, the quantity of the import item 24 i.e. Dyes shall be enhanced to "20 Kg (Out of the total quantity of 20 Kg, the quantity of Reactive Dyes shall not exceed 0.6 Kg).
Note: 2. Item No. (ii) for 12 (a) shall not be allowed for the grain garment leather and gloving leather.
Note: 3. Supplementary Vegetable Tanning Agents Gambier/ Chestnut/ Tara/ Sumac shall be allowed for import on Actual User condition. In case of DFRC, these items shall be used by the licensee only and shall not be allowed for transfer/ sale.

j. Lactic Acid which is appearing as Deliming Agent against inputs shall not be allowed.

k. Synthetic Resins and Hydroxy Ethyl Cellulose in any broad heading of Chemicals may not be allowed.

l. Any product in the name of fillers may not be allowed because formulated products manufactured by Leather Chemical Companies (as supported by their technical data sheets) are used in Leather Industry.

ANNEXURE-II

Revised Standard Input Output Norms G-46.

46	**Finished Leather from Skin of Goat/ Sheep/ Calf**	**1000 Sq.ft.**	1		Preservative (as per Sl. No.3 of General Notes for Leather and Leather products)	1.5 Kg
			2		Wetting Agent	5 Kg
			3		Soaking Enzyme (other than used in Food Processing Industry)	2.5 Kg
			4		Unhairing Agent:	
				a)	Sodium Sulphide	2. Kg
				b)	Sulfohydrate	2.5 Kg
			5		Leather Liming Auxilliaries	1.5 Kg
			6		Deliming Agent	2.5 Kg
			7		Bating Agent (other than Potassium Carbonate)	5 Kg
			8		Leather Degreasing Agent (Fatty Alcohol/ Esters/ Fatty Acid Derivatives)	5 Kg
			9		Bleaching Agent (Sodium Bisulfite/ Hydrogen Peroxide/ Sodium Chlorite/ Potassium Permanganate)	1.5 Kg
			10		Formic Acid	10 Kg
			11		Acetic Acid	2.5 Kg
			12		Chrome Tanning Agent:	Deleted
				a)	For Full Chrome Tanned Leather (i) Chrome Tanning Agent/ Relevant Reducing Agent/ Masking Agent (ii) Vegetable Tanning Agent such As Wattle or Mimosa/ Quebracho and supplementary Vegetable Tanning agents such as Chestnut/ Tara/ Sumac/ Re-tanning agent such as cutch	30 Kg 12 Kg
				b)	For Vegetable Tanned Leather Main vegetable tanning agents such as Wattle or Mimosa/ Quebracho Re-tanning agents such as cutch and Supplementary vegetable Tanning agents such as Chestnut/ Tara/ Sumac subject to the condition That Supplementary Tanning agents such as Gambier, Chestnut, Tara and Sumac shall be allowed a maximum of 30 Kg. (Betal nut/ Areca nut is not allowed)	55 Kg

				c)	For Vegetable-Chrome Combination Tanned Leather (Semi-Chrome tanned Leather)	
					(i) Vegetable Tanning Agent such as Wattle or Mimosa/ Quebracho Re-tanning agents such as cutch and Supplementary Vegetable tanning agents such as Chestnut/ Tara/ Sumac subject to the condition that Supplementary Tanning Agents such as Chestnut, Tara and Sumac shall be allowed a Maximum of 30 Kg.	55 Kg
					(ii) Chrome Tanning Agent	13 Kg
			13		Zirconium Tanning Salt	5 Kg
			14		Sodium Formate/ Acetate	5 Kg
			15		Sodium Bicarbonate	4 Kg
			16		Soda Ash	2 Kg
			17		Magnesium Oxide	2.5 Kg
			18		Syntan (only synthesized chemical products but not pure chemicals)	20 Kg
			19		Borax	5 Kg
			20		Oxalic Acid	2.50 Kg
			21		Sodium thio-sulphate	5 Kg
			22		Deleted	Deleted
			23		Fatliquors	20 Kg
			24		Dye Levelling Agent	1 Kg
			25		Dyes (Acid dyes/ Direct Dyes/ Premetallised dyes/ Basic Dyes/ Reactive dyes/ sulphur dyes) other than those of exclusively used in textile processing	10 Kg (Out of the total quantity of 10 Kg, the quantity of Reactive dyes shall not exceed 0.5 Kg and subject to the General Note 6 of Leather & Leather Product))
			26		Dispersing Agent (formulated products) excluding Nonylphenol	2.5 Kg
			27		Cationic dyes Fixative	5 Kg
			28		Pigments other than those used in ceramic colours, cuprous oxide ad aluminum oxide	10 Kg
			29		a) Binders other than those indicated below	10 Kg
					b) Casein based binders OR	15 Kg
					Resin/ Polyurathane based binders	10 Kg

			30		Liquid Dyes (based on Acid dyes/ Basic dyes/ Metal complex dyes)	10 ltrs
			31		Feel Modifiers	1 Kg
			32		Lacquer Emulsion	10 Kg
			33		Slipagents (Silicon based Oil)	1 Kg
			34		Fixing Agents/ Cross Linkers (Formaldehyde free)	1 Kg
			35		Wax Emulsion (only ready to use formulated products)	2 Kg
			36		Oil/ Wax for pull up finish (other than edible oils)	15 Kg
			37		Fillers for Leather Industry (Hydrophilic fumed silica not allowed)	3 Kg
			38		Spl. Auxiliaries for Stain/ Fire/ Grease/ Water/ Alkali/ Acid/ Oil resistance	5 Kg
			39		Pearlised Pigment and Powder (Bronze powered is not allowed)	1 Kg
			40		Fluorescent Pigment	4 Kg
			41		Special Lacquer for Brush off/ Two tone	10 Kg
			42		*Transfer foil (Polyester/ Polyurethane Metalised film-Silver/ Gold/ Bronze/ Mat/ Plain/ two Tone effect/ Glazy/ Nubuck effect/ Pull up effect/ Suede effect/ Floral and other design effects)	120 sq.mtrs
					Note: *This item will be allowed only for laminated finished leather using the above Transfer Foil/ Film.	
			43		Miscellaneous Items:	
					a) Knife Blades/ Band Knives: Splitting Band Knife/ Fleshing Knife/ Shaving Knife used in leather industry	
					b) Grinding Wheels for Splitting Machine/ Fleshing Machine/ Shaving Machine used in leather industry	Upto 5% of FOB value of export, out of which value of each of the items at (e), (g) & (h) shall not exceed 5% of the overall CIF value of Miscellaneous items permitted for import
					c) Felt/ Felt Sleeves Samming Machine/ Setting cum Samming/ Polishing Felt Roller	

					d) Stones: Polishing Stone Roller/ wet Buffing stone Roller	
					e) Emery Paper: Roll of 50 Metre Length	
					f) Glazing Glass in cylindrical shape	
					g) Padding Mohair cloth	
					h) Embossing plate	

Note: 1. Item No. (ii) for 12 (a) shall not be allowed for the grain garment leather and gloving leather.
Note: 2. Supplementary Vegetable Tanning Agents Gambier/ Chestnut/ Tara/ Sumac shall be allowed for import on Actual User condition. In case of DFRC, these items shall be used by the licensee only and shall not be allowed for transfer/ sale.

a. Lactic Acid which is appearing as Deliming Agent against inputs shall not be allowed.

b. Synthetic Resins and Hydroxy Ethyl Cellulose in any broad heading of Chemicals may not be allowed.

c. Any product in the name of fillers may not be allowed because formulated products manufactured by Leather Chemical Companies (as supported by their technical data sheets) are used in Leather Industry.

CHAPTER

10

Liquor Trade

1. INTRODUCTION

1.1 The word 'liquor' refers to an alcoholic drink, especially one made by distillation, such as whisky or rum, as distinguished from such beverages as wine or beer which are made by fermentation. Similarly and significantly, the word 'spirit' also, apart from its other meanings like holy spirit, public spirit, vigour or enthusiasm, refers to strong alcoholic liquor like whisky and rum which are produced by distillation. Wine, which also is an alcoholic beverage, is the fermented juice of grapes (or other fruits). Wines vary as to colour (red or white) and sugar content (sweet or dry). These may be effervescent (sparkling) or non-effervescent (still) and sometimes strengthened with additional alcohol. Hence, various types of wines and beer fall in one distinct category distinct from cooked spirits like whisky and rum.

1.2 Background of Liquor Market in India: India has the world's third largest and fastest growing market for alcoholic beverages. The whiskey market—estimated at 300 million cases—is the largest in the world. The World Health Organisation (WHO) reports that liquor consumption in India has been growing steadily since 2005. In the meantime, per capita consumption of alcohol beverages has increased from 3.6 litres to 4.3 litres between 2003 and 2010, 93 per cent of this growth comes from liquor (spirits). While tariffs on imported liquor remain high, domestic liquor manufacturing and sales are also enmeshed in a complicated network of laws and regulations on both the federal and state levels.

1.2.1 Indian Made Foreign Liquor (IMFL): Hard liquor that has incorporated imported raw material or borrowed the concept from foreign branded liquor are often termed as Indian Made Foreign Liquor (IMFL). Among all IMFL, whiskey accounts for approximately 46 per cent of total sales. Despite its origins, freedom to buy IMFL is restricted in some federal states. The southern states are often more heavily regulated in liquor manufacturing and distribution than the north. They are often available at retail outlets and privately owned bars. A licensing system is used by the federal states to control the number of private bars. Nevertheless, purchase of IMFL in southern Indian states including Kerala, Tamil Nadu, Karnataka and Andhra Pradesh still accounts for more than 60 per cent of total annual sale in the country.

1.2.2 Imported Foreign Liquor (IFL): IFL includes foreign produced liquor imported to India. IFL constitutes only a marginal share of the total alcohol consumption in India. Consumers of IFL are often rich and upper middle class people or international travellers. Duties on IFL are as high as 150 per cent, a reason why its share of India's total liquor market is less than 3 per cent. Despite the high custom duties on IFL and strict quotas on the amount of liquor travellers can carry into the country, whiskey imported has grown steadily over the years primarily driven by purchases from government, licensed retailers and manufacturers using IFL as raw materials for their own products.

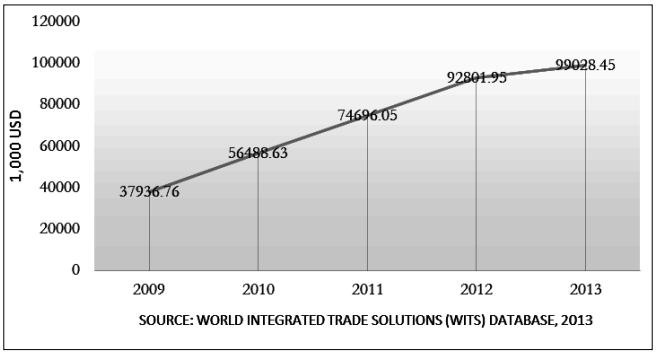


Fig. 1: India Gross Whiskey Imports 2009–2013

1.2.3 Country Liquor: Country Liquor, also called Indian Made Indian Liquor or (IMIL), is brewed and mostly sold domestically. Most of the country liquor is sold in northern states. Ethanol from molasses and grains are used in the north while palm and coconut are used in the south for producing the country liquor. The price of country liquor is much cheaper compared to IMFL and IFL; the reason it constitutes 48 per cent of the domestic liquor market. (Table 1)

1.2.4 Emerging Black Market: Restrictions on foreign liquor have led to a growing number of illegal liquor businesses in India. For instance, a state-wide ban on liquor sale in Gujarat, a state in Western India and Bihar in Eastern India, in particular, has given rise to wide-scale sales of spurious and cheap liquor followed by an increase in organized crimes in areas where demand is high.

1.3 India's alcohol industry is the third largest in the world with a value of $35 billion and adds to 65% of manufacturing and about 7% of imports into the territory. The industry is divided into three categories: Indian Manufactured Foreign Liquor (IMFL), beer, and homemade liquor. The exact gauge of unrecorded liquor production is not clearly known.

i. The mass liquor manufactured in India is predominantly from sugarcane molasses. Around 52% of liquor produced in India is for the consumable reason.

ii. Among the prevalent liquor products, country liquor and Indian-made foreign alcohol represent about 60 to 70% of the aggregate beverage liquor consumed. The conventional home-prepared beverages represent an expansive degree of unrecorded consumption.

iii. Liquor sale and production and distribution are basically a state subject in India. Because of a few impediments in the current excise policies, a considerable lot of the Indian states produce liquor far in abundance of the stipulated quantity.

Table 1: Affordability, Market Share and Geographical Accessibility of Liquor and Beer in India

Type	Pricing	Market Share (Per cent)	Geographical Availability
IMFL	Affordable	36	Southern States
IFL	Luxury	3	Metropolitan Cities
Country Liquor	Cheap	48	Across India
Beer	Expensive	13	Urban Areas
Illicit Liquor and Other	Very Cheap	Not Available	Across India

iv. The production, sale, and distribution pursue a complicated duty structure differing from state to state. The tax assessment on imported liquor additionally varies between 100% and 500%.

v. The consumption level of liquor is not directly connected with the taxation policies because the government only increases the tax to generate more revenue.

vi. The policies which are promoted till date have been basically with a view to expanding taxes to generate more revenue and not from a public health perspective. Actually, the importance of public's' health has been totally ignored while making the policies and programs.

1.4 The report says that about 30 per cent of India's population, just less than a third of the country's populace–consumed alcohol regularly (as of 2010). Some 11 per cent are moderate to heavy drinkers. The average Indian consumes about 4.3 litres of alcohol per annum, says the report. The rural average is much higher at about 11.4 litres a year.

1.5 Alcohol consumption in India amounted to about 5.4 billion litres in 2016 and was estimated to reach about 6.5 billion litres by 2020. The steady increase in consuming these beverages can be attributed to multiple factors including the rising levels of disposable income and a growing urban population among others. The following bar chart shows the trend in consumption:

1.5.1 Alcohol Market in India: India's alcohol market consisted of two main kinds of liquor–Indian made Indian liquor or IMIL, and Indian made foreign liquor or IMFL. This was in addition to beer, wine and other imported alcohol. *Country liquor* accounted for the highest market share, while spirits took up the majority of the *consumption market.*

1.5.2 Young Consumers: Although the average per adult intake of alcohol was considerably low in India when compared to other countries such as the United States, heavy drinkers among young Indians were more prevalent. *Men were more likely to drink than women* by a large margin and were also more prone to episodic drinking. According to a study, over 88 per cent of Indians, aged under 25, purchase or consume alcoholic beverages even though it is illegal. This was despite bans on alcohol in some states across the country and limitations on sales in some others.

1.5.3 Consumption of alcoholic beverages in India from 2016 to 2020 (in billion litres):

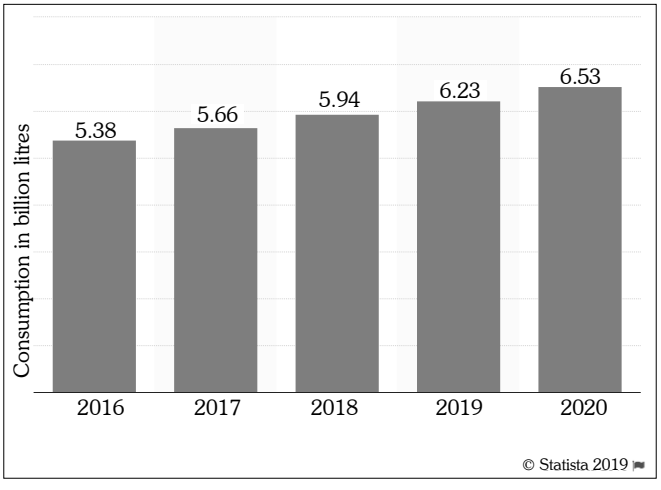


Fig. 2

1.6 It may be noted that the liquor industry has been kept out of GST, which was rolled out on 1st July, 2017. State governments are becoming more and more dependent on alcohol revenue to pay their bills. With the exception of Bihar, Gujarat, Nagaland, Mizoram and Manipur, where liquor is officially prohibited, alcohol revenue takes the second, third or fourth place in terms of contributions to a State's coffers. Governments often project excise revenue alone, but sales tax is much more than Excise. In States such as Tamil Nadu, Kerala and Delhi, where the wholesale and retail liquor business is under government control, alcohol revenue is relatively easy to reckon. In Andhra Pradesh, Orissa, Chhattisgarh, Rajasthan, Uttarakhand, Uttar Pradesh, Karnataka and Bihar, governments run the wholesale business, leaving retail to private players. Maharashtra's liquor business is in private hands.

1.7 More than a fifth of alcohol produced in the world is consumed by Indians. *The Lancet* magazine points out that two-thirds of alcohol consumed in India is unrecorded, mainly illicit. Tribal, backward and working-class communities in most parts of the country consume arrack and palm toddy.

1.8 India is the largest whisky market in the world. There is increasing demand for imported whisky and wine. Economic affluence, urbanisation, changing lifestyles and social mores are all persuading young people to take to drinking.

2. No reliable statistics exist for worldwide production and consumption of liquor. The great variations in alcohol concentrations of various liquors make it difficult to determine the real amount of alcohol consumption. According to the Industry of Distilled Drinks, a survey of 45 nations shows that despite its higher concentration of alcohol, only about one-fourth of the alcohol consumed is in the form of liquor i.e whisky, brandy or rum. Beer and wine are the first and the second greatest sources of alcohol.

2.1 Over the past few years IMFL market has grown at a rate of 10% and is heavily skewed in favour of whisky, rum and brandy, accounting for 60%, 25% and 20% respectively. Around 5% is accounted for by white spirits such as gin and vodka. The all important whisky market is further segmented into the regular, prestige, premium and deluxe subparts. The beer industry has been expanding at a pace similar to IMFL.

2.2 The fortunes of the industry are linked to the ideologies of the political parties ruling the States. Being a major vote-catching weapon, especially of the women, prohibition has affected the profitability of many breweries and distilleries. For the political parties it is a choice between the devil and the deep sea. If on the one hand, the revenues lost because of prohibition can threaten the solvency of State governments, the clamping of the dry order can threaten the regime's existence itself.

2.3 The Indian alcohol market is growing at a CAGR of 8.8% and it is expected to reach 16.8 Billion litres of consumption by the year 2022. The popularity of wine and vodka is increasing at a remarkable CAGR of 21.8% and 22.8% respectively. India is the largest consumer of whiskey in the world and it constitutes about 60% of the IMFL market.

2.3.1 Though India is one of the largest consumers of alcohol in the world owing to its huge population, the per capita alcohol consumption of India is very low as compared to the Western countries. The per capita consumption of alcohol per week for the year 2016 was estimated at 147.3 ml and it is expected to grow at a CAGR of 7.5% to 227.1 ml according to estimates.

2.3.2 The fact is that for most of the state governments, up to one-fifth of their budget are funded by alcohol. Apart from Bihar (after the Supreme Court stayed Patna High Court order), Gujarat, Nagaland, Mizoram and Manipur, where liquor is prohibited, revenue from alcohol is a major contributor to state exchequer.

2.3.3 Here are the top earners:

Table 2

States	Revenue from Alcohol
Tamil Nadu	Rs. 29,672 crore
Haryana	Rs. 19,703 crore
Maharashtra	Rs. 18,000 crore
Karnataka	Rs. 15,332 crore
Uttar Pradesh	Rs. 14,083 crore
Andhra Pradesh	Rs. 12,739 crore
Telengana	Rs. 12,144 crore
Madhya Pradesh	Rs. 7,926 crore
Rajasthan	Rs. 5,585 crore
Punjab	Rs. 5,000 crore

Source: India Today https://www.indiatoday.in/india/story/booze-revenue-alcohol-economy-prohibition-tamil-nadu-bihar-supreme-court-345588-2016-10-08

2.5 According to a study conducted by the Organisation for Economic Cooperation and Development (OECD), per capita liquor consumption in India grew at 55 per cent between 1992 and 2012. Another study by the World Health Organisation found an increase of 38 per cent in the per capita alcohol consumption in India. Naturally, increased consumption has led to better income for the states.

2.6 Raising liquor taxes-which bring in nearly 25% of revenue-is the most likely option as state governments are unlikely to borrow and worsen their debt-to-GDP ratios. But any increase in taxes will have an adverse effect on alcohol demand as liquor companies are sure to pass on the buck to customers. In the past, there have been multiple instances where volumes have taken a beating owing to price hikes emanating from an increase in the tax rate.

2.7 Maharashtra has already taken a step in this direction. The Maharashtra government increased the excise duty on Indian-made foreign liquor by 20%, and the buzz is that it will help fetch additional revenue of Rs. 2,000-2,500 crore. In the recent past too several states had hiked up taxes on alcohol. For instance, Gujarat had tripled the excise duty on alcohol while Kerala had announced a hike of up to 210% on liquor. Karnataka, meanwhile, announced an excise duty hike by 8% on liquor, after upping the additional excise duty on it to 21% in the previous budget. According to India Filings, it is estimated that the taxes on beer and liquor fetch state governments around Rs. 90,000 crore in taxes each year.

2.8 That is the main reason why alcohol is out of the GST net, despite being a "sin goods". For the record, a sin tax is levied on items that are harmful or costly to society, like tobacco. The idea behind this tax is to provide a revenue source to governments while deterring consumption of such items by keeping prices high.

2.9 While alcohol has been kept out of the new tax regime, the input raw materials used in manufacturing liquor do incur GST. This used to be taxed at around 12–15% under various VAT regimes previously, but under GST the tax incurred on most of the raw material stands at 18%. Also, the GST applicable on freight and transportation charges is higher than under the previous tax regime. Due to these factors, alcohol prices went up after the introduction of GST, and continue to rise year-on-year.

3. MANUFACTURE OF BEER

3.1 The origins of beer go almost as far back as those of wine. Beer has been made by virtually all people in all stages of civilization. African tribes produce it from millet, the Japanese from rice, Europeans, Americans, Australians and others make it mainly from barley. In India, generally barley or maize is used. Beer is the general term for all classes of beers-draft, bottled or canned, ales, lagers and stout. It is brewed from malt, sugar, hops and water and is fermented with yeast. Quality is largely dependent on the suitability of the main raw materials for the type of beer being produced.

3.2 The following are the ingredients of beer:

i. Malt begins its life as barley. First, barley is dampened with water and allowed to germinate under controlled conditions in order to convert the insoluble starch to soluble sugar. It is then dried and cured, to a pale colour for pale beers and to a richer colour for dark beers.

ii. Sugars used in brewing are manufactured from cane sugar, which is treated in different ways to give different flavours and sweetness.

iii. Hops are specially grown for brewing and give beer its bitter flavour. Only the flower, cone of golden petals carrying resin and oils, is used.

iv. The water used in brewing is specially treated with mineral salts for the particular type of beer being processed. In earlier

days before the days of water analysis, famous brewing centres emerged because the local water was particularly suitable for the brewing of certain types of beer. For example, Pilsner, the famous beer of Polsen in Czechoslovakia, is brewed with natural water and is recognised as one of the finest beers in the world.

v. Yeast, a living organism, is the agent which ferments the beer.

3.3 The process of production of beer is not very complicated. Beer is produced chemically by the action of yeast on appropriate carbohydrates-in this case, malt. For making Beer, grist-which is a blend of malt, is crushed in a mill, and depending on the recipe, is mashed into a porridge-like consistency with hot demineralised water. This mash is collected in lautertun (Stage-I), and then left for about two hours to allow the breakdown of the small starch molecules into various sugars. The sweet wort or malt sugar extract is filtered off and collected in the brewing copper or wort kettle (Stage-II). During filtration, hot water is splurged over the mash to ensure complete extraction of the malt sugars. In the wort kettle, hops and sugar are added and the whole thing is boiled for about 1½ hours.

3.4 The characteristic sweet, foul smell of the brewery comes from the boiling and it is carried out to bring about among other things, sterilization and the extraction of the bitterness from the hops. After boiling, the spent hops and grains are removed and collected in the spent grain tank. The contents in wort kettle are then transferred to hop-back (Stage-III) when it is centrifuged and the bitter extract is cooled to about 10 degree C, and run into the fermentation tanks (Stage-IV).

3.5 Suitable yeast, usually from a previous brew, is added in the fermentation tanks (Stage-IV). The fermentation commences and the wort changes into beer as alcohol and Carbon dioxide gas is formed. The beer is then pumped into washing tanks (Stage-V) where a very fine stream of carbon dioxide is bubbled through it to wash out the undesirable new flavors and smells which are common to all beers in their early stages. After washing, the beer is run into storage tanks (Stage-VI) where further carbon dioxide is added to bring about the desired mount of carbonation. After a few days, the beer, which is now ready for bottling, is filtered (Stage-VII) through the fine asbestos filter sheets, thereby removing any yeast or other deposits which may have formed in the beer during storage, and which would cause trouble at a later stage after the beer has been bottled.

3.6 The filtered beer is collected in a bottling tank (Stage-VIII) and from the latter it is passed to the filing machine (Stage-IX) where it is filled at high speed into bottles which have been carefully washed and made more sterile. The crown cork is then fixed by a special machine and filled bottle is subjected to Pasteurisation (Stage-X). The latter process consists of heating the bottle gradually in water to a temperature of approximately 63°C, holding this temperature for half an hour and then cooling it slowly before putting on a cap and finally labeling it and making it ready for dispatch to the markets. Pasteurisation is carried out to ensure that the beer when it reaches the consumer is perfectly sterile and will remain for a number of months in a starbright condition.

3.7 Certain terms peculiar to this process may now be defined:

3.7.1 Steeping: Steeping means putting barley in water. It is steeped for about 62 hours, with two air rest periods of 12 hours and 10 hours. Steeping schedule is 20 hours in water, air rest of 12 hours in water and air rest for 10 hours.

3.7.2 Couching: The steeped barley is couched. It is couched till the chitting (sprouting) has started. The period generally varies from 8 to 20 hours. Couching is part of first day of germination (Flooring).

3.7.3 Germination: The couched barley is then spread on the floors. It is germinated for

6–7 days till the required level of germination is attained. The temperature is controlled by turnings, aerating at regular intervals.

3.7.4 Kilning: To arrest the germination, the germinated barley is put into the kiln. Then it is dried by heating at the required temperature. After that malt is packed, weighed and sent to store. The process till flooring depends on the atmospheric condition and quality of barley. These processes are subject to change in the above two factors. Normally it takes about 11 days for one steep to pass through four stages. During the four stage process there is no possibility for fumigation.

4. MANUFACTURE OF RUM

Rum, a product of cane and water, is essentially West Indian in origin. Sugarcane perhaps brought from the Azores by Columbus on his second voyage and the pure West Indian water which tumbles down from the mountains were the main ingredients. Rum is made principally from molasses, which is the uncrystallised mass remaining after the formation of sugar; either directly from the sugarcane juice, or from second grade molasses and other residues. The last type is usually called tafia, not rum, and it is seldom worth bottling. The majority of fine rums come from molasses. However, the best and famous Marinique of Haiti, is made directly from cane juice syrup concentrate.

5. MANUFACTURE OF WHISKY

5.1 In India whisky is not made in the complex way it is done in Scotland. Comparatively small quantity of whisky made from malt is blended with huge quantities of rectified spirit (made from molasses), colouring materials and caramel or other essences for taste. Now scotch whisky is imported in bulk and blended with locally made whisky or extra neutral alcohol.

5.2 Single Malt Whisky: In whisky, single malt is more prized. It is *malt whisky* from a single distillery. On the other hand, a blended whisky is actually a combination of a barrel-aged malt whisky (as in all barley) and some quantity of grain whisky (a whisky made with barley as well as other grains). Under the United Kingdom's *Scotch Whisky Regulations,* a "Single Malt Scotch Whisky" must be made exclusively from malted barley (although the addition of *E150A caramel colouring* is allowed), must be distilled using *pot stills* at a single distillery, and must be aged for at least three years in oak casks of a capacity not exceeding 700 litres (150 imperial gallons; 180 US gallons). *American whiskey* advertised as "single malt whisky" is produced from malted *rye* rather than malted barley. All single malt goes through a similar *batch production* process. There are several types of single malts available from distilleries including single barrel single malts which are the product of a single batch that was stored for three or more years in a single oak barrel. These single barrel variants afford the opportunity for the consumer to see the influence of different types of storage on the same whisky (e.g., first use *bourbon whiskey* barrels, port pipes, etc.). The more common form of Single Malt is a marrying at bottling time of various batches that are mixed or vatted to achieve consistent flavours from one bottling run to the next. Taste depends upon– where the scotch is made, how long it was aged and in what it is aged.

6. MANUFACTURE OF COUNTRY LIQUOR

6.1 In India, besides the above different forms of wines and spirits, a sharp distinction is made between India-made foreign liquor (IMFL), and country liquor. IMFL includes all liquors made in the country in imitation of imported liquors whereas country liquors include fermented liquors prepared according to indigenous processes using local recipes, plain spirits made from approved bases and special liquors which do not imitate any imported liquors or cordials. 'Toddy' or tari is the most important of the

country beers. It consists of the fermented or unfermented sap drawn from any kind of palm tree, from the spadix in the case of coconut and palmyra and from the stem. This sap ferments naturally and rapidly into malts. Other country beers are made from rice, barley or millet and sometimes from gur or mahua. Such beers are known in Bengal as pachwai, handia, jaur, marua, kusha and sugda; in Assam as boza, madh, zu and laopani; in UP as boza, darbahra, soma and rabra, in the HP as su, lugri, chang and angoori, in Kashmir as chang or arak, in Karnataka as akki-bhoja and in Tamil Nadu as londa, henda and sontisaru, and in Andhra as sendhi and 'arak'.

6.2 Country spirit is plain spirit made from materials recognised as a country spirit base. It is issued and sold at fixed strengths at country liquor shops and is subject to the local rate of excise duty. The bases recognised are unrefined sugar, cane or date gur, jaggery, molasses or shira, mahua or in special cases toddy, resins and date etc.

6.3 Wine: Wine is a type of alcoholic beverage with lower alcohol content. Wine entails a longer fermentation and aging process as compared to other types of alcohol. It can take years only to produce an alcohol content of 9–16%. As the word's Latin origin, 'vine' (meaning grape) suggests, is an alcoholic beverage mainly produced from fermented grapes. There are also other types made from fruit juices obtained from apples, cherries, and plums, consequently generating several varieties of the said beverage, such as apple or elderberry wine, fruit or country wine, *barley* wine, sake, etc. However, grape juice is the preferred raw ingredient in the winemaking process due to its natural chemical balance that allows it to ferment without the aid of enzymes, acids, sugars, and other agents. The role of yeast in winemaking is the most important element that distinguishes *wine* from *grape juice.* In the *absence of oxygen, yeast* converts the *sugars* of wine grapes into *alcohol* and *carbon dioxide* through the process of *fermentation.* Different varieties of grapes and strains of yeasts produce different styles of wine.

6.4 Red Wine: The red-wine production process involves extraction of color and flavor components from the grape skin. Red wine is made from dark-colored *grape varieties.* The actual *color of the wine* can range from violet, typical of young wines, through red for mature wines, to brown for older red wines. The juice from most purple grapes is actually greenish-white; the red color comes from anthocyan pigments (also called *anthocyanins*) present in the skin of the grape; exceptions are the relatively uncommon *teinturier* varieties, which actually have red flesh and produce red juice.

6.5 White Wine: Fermentation of the non-colored *grape pulp* produces white wine. The grapes from which white wine is produced are typically green or yellow. Some varieties are well-known, such as the *Chardonnay, Sauvignon*, and *Riesling.* Other white wines are blended from multiple varieties; *Tokay, Sherry, and Sauternes* are examples of these. Dark-skinned grapes may be used to produce white wine if the wine-maker is careful not to let the skin stain the *wort* during the separation of the pulp-juice. *Pinot noir, for example, is commonly used to produce champagne.*

6.5.1 Dry (Non-Sweet) White Wine is the most common, derived from the complete fermentation of the *wort.* Sweet wines are produced when the fermentation is interrupted before all the grape sugars are converted into alcohol. *Sparkling wines,* which are mostly white wines, are produced by not allowing *carbon dioxide* from the fermentation to escape during fermentation, which takes place in the bottle rather than in the barrel.

7. The 29 states along with seven union territories in India have adopted different approaches when it comes to taxing and

regulating liquor. For instance, the state of Gujarat has entirely banned trade and consumption of liquor since 1961. By contrast, Puducherry, the territory on the Coromandel Coast, earns most of its revenue from alcohol trade.

7.1 Some of the states auction retail and wholesale licenses, while others have their own monopolies. Tamil Nadu is one state that has a monopoly on the alcohol trade and employs more than 30,000 people with over 6,000 outlets.

8. TAXATION OF LIQUOR

8.1 Even though liquor hasn't been brought under the purview of Goods and Services Tax, it still falls under other taxes that contribute to its rising prices. These taxes are:

i. Excise Duty

ii. VAT (Value Added Tax)

8.2 Alcohol was not brought under the purview of GST regime primarily due to two reasons:

i. To ensure that the State Governments continue to have a strong inflow of revenue (other than what they get from GST). It is estimated that taxes on liquor and beer fetch the state governments nearly INR 90,000 crores annually.

ii. To keep the prices of liquor and beer high to limit consumption.

9. EXCISE LEVY

9.1 As already stated breweries and distilleries have traditionally been money spinners for governments. Taxes on distilled spirits are among the highest taxes imposed on any product. Liquor being a state subject, there is a levy of state Excise duty which in some states is as high as 200%. The duty structure for each state is so different that for a company operating at the national level it is like dealing with several countries. On average 60% of what one pays for a bottle of distilled spirit goes to the government in taxes rather than for the liquor. Hence there is substantial evasion of duty and consequently of Income-tax.

9.2 The crucial point of reference for both the State Excise and Income-tax is the same-the quantity produced. Suppression of production of goods, as a natural corollary, leads to suppression of sales and profits. In the case of excise duty, the taxable base is the quantum of production of excisable goods. The duty liability is charged-in terms relatable to factors such as weight, length, area or volume, or on ad-valorem rates dependent on the value of goods. Besides, there are certain exemptions for various categories. Therefore, the evasion of duty is resorted to by-suppression of production in case of production based rates, under valuation of goods in case of ad valorem duty, misclassification of goods to minimise duty liability in case of exempted goods.

9.3 Suppression of production of goods is a device resorted to frequently by the duty evaders. The task of identifying the quantum of evasion is impossible, while making a guess can be hazardous. All that can be done is to plug the loopholes. Besides the production based control other checks like 'clearance-based control' or 'record-based control' have also been prescribed.

9.4 The State Excise authorities keep a tight supervision and control on the production of all intoxicating materials including wines and spirits and beers by exercising production based control. Whereas, on the one hand, they can be a great help to the AO by providing a readily available information system on the facts and figures of a particular fact, on the other hand, these records can act as a handicap if not properly maintained or if the control exercised is not effective and management is allowed an opportunity to hoodwink the Excise staff present on the premises. Because, on the strength of these records and checks, the assessee will have a readymade and foolproof evidence in support of his figures of quantity of liquor produced, stocks available and sales to contractors that would be difficult to controvert.

9.5 Board's instruction on the subject issued vide their letter in F. No. 414/1/80-IT (Inv) dated 25/04/1980, reproduced below for ready reference, is still relevant:

"1. During the course of assessment proceedings, Assessing Officers normally examine the records maintained by assessees relating to payment of Central Excise duties. Since such records would have already been checked by the officers of the Central Excise Department, there seems to be an impression that the quantum of the production of goods, etc. noted in such records or registers must be invariably accepted by the Assessing Officers as unimpeachable.

2. These registers which have been prescribed by the Central Excise regulations are contemporaneous records and would prima facie be considered by any court of law as good evidence regarding production, etc. However, cases have come to light where detailed examination has led to the establishment of tax evasion due to understatement of production, etc., not reflected in such registers, e.g., where the factory has been run on an extra shift and the entire production from this shift has not been noted in the registers.

3. It may, therefore, be impressed upon the Assessing Officers that they should not take for granted the accounts authenticated by the Central Excise Officers and such authentication does not necessarily mean that all the entries in the accounts have been checked by the Central Excise Authorities. The Assessing Officers should scrutinise the accounts from the Income-tax point of view. The Board desires that in all cases where substantial tax evasion is suspected, the Assessing Officers must apply their mind to this aspect of the matter independently."

10. AREAS OF MANIPULATION

10.1 Most of the distillers/ brewers indulge in manipulation with a view to conceal income and evade taxes, particularly, in the figures of- (i) production, (ii) purchases, (iii) wastage, (iv) utilisation of outflows and husks, (v) transit depots, and (vi) allotment of agencies/ depots. Hence, the AO should be familiar with the processes of production and the trade practices. It will help the AO to carry out cross-checks and verification of the figures of production, purchases and sales, etc.

10.2 It is in the manufacturing account that the assessee can and generally does manipulate the figures to conceal the extent of his production which lead to suppression of sales. Some suggestions regarding the method of examining these items occurring in Manufacturing account are given below.

11. PRODUCTION

11.1 The chemistry of the process is summarised below for clear understanding of the subject. Cane molasses of the sugar industry contains fermentable carbohydrates (sugar) mainly a crude form of sucrose with the approximate composition of water (16%), sucrose (33%), invert sugars (20–21%), organic non-sugars (19–20%), ash (9–10%), potash phosphates, organic nitrogen and vitamins are present in small quantities.

11.1.1 The quality of molasses vary from year to year and from factory to factory depending on the process adopted in a particular sugar factory. It is subjected to fermentation with the help of a special living microorganism called yeast.

11.1.2 The state Excise authorities keep an hour to hour and shift to shift record of production. Further, every day's production is transferred to what is known as the 'bonded warehouse' kept by the Excise authorities within the factory premises and released on the production of a certificate known as 'duty paid permit' or 'export pass' confirming the fact of excise duty having been paid.

11.2 The date of payment of Excise duty as recorded in the books of account must be cross-

verified with the actual date of depositing the money in the government account. The record of quantity of production is kept in terms of number of crates/ bags and bottles. But this strictness of control by state Excise authorities is only in theory. In practice, only the bags/ crates are counted and they are not opened to check the number of bottles contained therein. But to reject the figures of the assessee on this ground is a very difficult task for which a foolproof case will have to be made, on the basis of independent investigation and substantial evidence. In some cases, a simple method of producing and smuggling out unaccounted quantity of liquor has been to pack 2 or 3 bottles more than the stated capacity of the box/ crate, which is 24 or 12.

11.3 Another Cross Check on Production: is provided by the number of bottles procured by the assessee during the year. Most of the distillers have their own ceramic factories or have captive ceramic factories. While the liquor production is under the supervision of the State Excise authorities, the manufacture of ceramics/ glass bottles falls under the jurisdiction of Central Excise authorities who can give the figures of total bottles of various types manufactured by the ceramics factory. Further, the distiller/ brewer has to keep a record of functioning of boilers-giving duration for which these were used, number of shifts worked, their capacity, and the fuel consumed. In his own interest the assessee would ensure that these records are correct. By relating this information to other factors and processes mentioned above, it should be possible for the AO to estimate total production and verify the correctness of the production disclosed by the assessee. The AO should also call for details of licensed capacity, installed capacity and actual production for the relevant year.

11.4 Purchases: While in other countries, the distillers/ brewers produce their own grains particularly barley or they have captive farms to produce the right type of grains for them, in India the barley is generally purchased from open market. The quantities purchased are very large and avenues of manipulations and adjustments in this account are many, like inflation in terms of quantity, wastage in movements or stocking, and in terms of price rate per tonne. Another area that presents difficulties is the verification of the figures of consumption shown during the year as also the closing stock of grains and its valuation. Since the purchasing operations are carried out over a vast area and generally made directly from the growers, detailed cross checking is very difficult and would be a long drawn affair. The quantity to be purchased and the rate have to be contracted in advance. A sample check to verify the facts of such agreements may be made. A major device resorted to by the assessees in this context is to indulge in forward trading and speculation. Therefore, the fact of physical transfer and movements of these grains needs to be verified with reference to the trucks/ wagons employed, cartage paid and octroi receipts. Commissions are also paid to the purchasing agents/ arhatias for such purchases made from the mandis or the growers and a reference to their books of account in certain cases will be worthwhile. Mere dispatch/ receipt of communication slips in this regard will not be of any use.

11.5 Consumption: The usual stores issues registers are maintained. Since the Excise controls are on the basis of production-the consumption and production at each successive stage are checked and verified by the excise authorities. However, a rough and ready method for check by the AO may be given here. Depending upon the type of beer produced and its gravity, normally out of a 100 kg of barley/ maize 550–600 litres of beer may be produced. Similarly, depending upon the method, still, climate, and the quality of grains and other raw material, 16–17 alcoholic litres of whisky spirit may be obtained from one quintal of barley malt. These scales of consumption depend on the quality of raw materials like barley, etc, and they are only approximate guides. Therefore, only gross

variations may be pointed out to the assessee for explanation. This may be cross-tallied with the installed capacity and type of the still or brewery, number of casks/ vats in use with their capacity, excise records and data sent by the distillery/ brewery to the Association of distillers/ brewers, Indian Standards Institute and such other authorities. The figures in the manufacturing account should further be compared with the corresponding figures of earlier years, and any wide variations in ratios and proportions be questioned.

11.6 Wastage: This depends upon the quality of raw materials. As mentioned above the yield of malt from barley may vary between 40–55% depending upon the quality of barley. The remaining husks are sold as fodder and it should be seen that the total of quantities of malt produced and husks sold plus general wastage of 5% adds upto the purchases of raw materials of barley, etc. shown by the assessee. It should also be looked into that the sale price obtained from such outflows and wastage material or their alternative utilisation is properly accounted for.

11.7 Transit Depots: Transit depots are generally established by factories near the inter-State boundaries or centrally in a distribution zone comprising a number of depots. The transit depots are also under the State Excise departments who keep a record of all receipts and issues of liquor/ beer giving number of wagons/ trucks that reported in during a day and number of crates/ sacks carried by them. Account is kept of the quantity of the stock available at the transit depots and also the incoming and outgoing during a day. A surprise survey for taking stock inventory may be carried out by the AO, and the stock position tallied with the records of the excise authorities. Actually figures of opening stock available at the beginning of the accounting year, stock received/ issued during the year and the closing stock in terms of quantity as well as value should be obtained from the depots as well as the transit camp, totalled and compared with the production figures given by the assessee. Generally assessees have their own trucks whose logbooks should be checked in terms of distance, time, number of trips made, diesel, consumption and load carrying capacity.

11.8 Allotment of Depots/ Agencies: As in the case of transit depots, the Excise authorities also keep a control and maintain records of stocks handled by the depots. The choice of persons to whom the depots are to be allotted remains with the producer concerned. Since depots handle the sale and supply of allotted quotas to the liquor contractors and therefore exercise a great influence in the liquor market they are the crucial barrage through which sales and supply of liquor outside the books of account of the distillers as well as the Liquor contractor is generally made. Actually this is the area which provides scope for large scale money transactions outside the books of account of the assessees. Charging of on-money for allotments of these depots is generally practiced by most distilleries/breweries. The quantum is directly proportional to the total production of the factory and the quota allotted to a particular area fed by that depot. Hence, detailed inquiries about the depot holders must be made at least in areas where demand for a particular brand is known to be especially high and other alternatives are not easily available. These depots do not enter into retail sales and issue liquor only to authorised licensed contractors on wholesale basis.

11.9 Accounting of Closing Stock: At any point of time, the distillery/ brewery will have stock of goods and raw materials in various stages of production/ completion which may be categorised as under:

i. Raw materials.

ii. Stock in process.

iii. Finished goods.

iv. Stock in Trade.

v. Standing crops, if any (of barley, molasses, hops, etc.).

11.9.1 Thus accounting of these stocks at the end of the year in terms of quantity as well as value is a difficult task and verification of the same for correctness is still more so. As far as quantitative tally is concerned, the brewery/ distillery take out the balance from their stores issue registers which are required to be presented by them to the Excise authorities for their examination. But the AO should also obtain a qualitative analysis of closing stock if an inventory of the same is not already given in the annual statement of accounts. The closing stock of the raw material of a brewery/ distillery will include beer, spirits (qualitative break up), maize, rice, barley, yeast (of different types), malts, molasses, hops, liquid and dry carbon dioxide, sundry chemicals, tools and equipment, etc. It should be ensured that finished stock lying at different places *viz.* in bonded warehouses, in transit, in the depots, in the pipeline are accounted for. The general principles of valuation of closing stock are equally applicable to the liquor industry. First in first out is the normal principle for accounting of stocks and the same may be valued at cost or market price or the lower of the two. But the method adopted should be consistently and uniformly the same from year to year. The closing stocks should also be verified against total purchases, consumption and wastage.

11.10 Manufacturing and Profit and Loss Account

11.10.1 Manufacturing and profit and loss account of a distillery/ brewery generally include all heads of account as in any other industry. Whatever heads of account a distillery/ brewery may have, information on items of expenditure should always be obtained if not available from the statements rendered by it. Detailed checking of vouchers etc. to verify the genuineness of each item of expenditure is an impossible task except in the case of some of the important heads or on a random sample check of major amounts. In general, only statutory admissibility of expenses claimed can be questioned which forms the bulk of case law relating to this industry. Most of the concerns do resort to misclassification of expenses. For example, personal expenses of the Managing Director or other Director, or top executives, benefits and facilities made available which may be actually for their private exclusive use e.g. a guest house may only be maintained as a summer resort of the higher executives, cars or furniture/ refrigerator/ air conditioners etc. may be actually provided at their residence at company expenses and charged to the profit and loss account, or traveling and hotel expenses incurred by them on their private visits may be claimed as business expenses. Certain illegal payments although made in the course of business would not ordinarily be allowable and therefore would be camouflaged under various heads of accounts like purchases, commission etc. Thus disallowance of such personal expenses, benefits and perquisites or illegal expenses will have to be made.

11.10.2 Similarly, attention should be paid to claims like 'stores and spares consumed' 'Excise duty paid' 'repairs' 'breakage and leakage' 'commission to agents' 'octroi' 'packing and forwarding' and 'depot expenses'. The extent of these expenses should be related in proportion to the purchases made and the goods produced.

11.10.3 In the case of major payments like 'Excise duty' a reference should be made to the actual date of payment which should be compared with the date on which the payment has been recorded in the assessees' cash book. A reference to the relevant vouchers of carriage or octroi charges paid on that particular consignment may bring out interesting facts to light.

11.10.4 In quite a few cases, investigations into purchases of old bottles have shown inflation under this head. Hence, any outstanding towards purchases should be probed.

11.11 Sale

11.11.1 Because of variations in Excise laws in different States, the distilleries/ breweries establish and follow different channels of sales

and supplies of their produce. In some States the system is that out of the wholesale (L-I) licensees, the producers choose some to be appointed as their agents. They do not allocate all their brands to one agent only, but distribute the same amongst various whole-sellers appointed as their agents. The agent wholesale dealer then makes purchases directly from the distillery. In most of the States the system is that goods are allowed to be lifted by wholesale vendors from the distillery without payment of Excise duty. These are then stocked in a bonded warehouse, maintained by the Excise authorities. An Excise Inspector is attached with each wholesale vendor or each bonded warehouse. Excise duty is charged at the time of sale by the wholesale vendor.

11.11.2 In other States, the producers establish their own depots which also stock the liquor under license and are, therefore, subject to control of the Excise authorities. Their operations, method of accounting and examination thereof have already been discussed above. Some of the distilleries do not give agencies to the wholesale licensees but carry out the wholesale transactions by themselves. Method of their operations is the same as that of regional depots established by other distilleries. The system of issuing licenses to these parties is discussed in detail in subsequent paragraphs. The agents appointed by the producers are paid commission on total sales transacted by them. Hence quantity of goods lifted by them from the distilleries and sale transactions carried out by them can be conveniently understated by collusion between the principles and the agent which would serve both the parties, to understate their profits. The agents further have their sales promotion agents. Cross examination of such agents or enquiries with disgruntled element in the channel may give helpful clues.

12. IMFL CONTRACTORS

12.1 Anyone stocking liquor above a particular quantity or selling liquor has to obtain a license from the state Excise departments for the purpose. This applies equally to hotels, bars, and restaurants for sale or stocking of liquor. There are different categories of licensees meant for different purposes or different types of stockists:

a. L-1 wholesale dealers.

b. L-2 retail dealers.

c. L-3 hotels.

12.2 Liquor contractors, known also as abkari contractors, are the persons who, on payment of certain fees are licensed by the respective State Excise Department to engage themselves in the purchase, stocking and sale of liquor and are almost exclusive channels through whom liquor trade is run. Each State has its own excise laws governing the collection of excise duty, controls on producers and traders, issue of licensees/ excise contracts and the same vary from one state to another. Changes are made in the procedure from year to year. For that reason before taking up the case of a liquor contractor a reference must be made to the latest Excise Manual of the State.

12.3 Contracts/ Licensees are Issued Generally: on annual basis, through an open auction as in Karnataka. In some of the states like Tamil Nadu, the licensees are issued on perpetual basis to be renewed every year on payment of certain fee. There are two types of liquor contract, one for India-made foreign liquor and the other for country liquor. There is another class of liquor contractors who are given license/ permit to import customs duty-free liquor for supply to foreign embassies and consulates.

12.4 Procedure for Allotment of Contracts/ Licenses: In most States, licenses for stocking and sale of liquor are allocated by open auction on an annual basis. However, in some of the states they are issued on perpetual basis, renewable from year to year. Financial year (April to March) is generally adopted as the licensing year but there are variations. For example, in Karnataka the period runs from July to June, in Andhra Pradesh the contracts are given for the

period October to September. A reserve price for each contract is generally fixed and notified. The license is allotted to the highest bidder. The auctions are made generally at district level. Separate licenses are allocated for sales on the wholesale basis (L-1) and retail basis (L-2). In some of the states like Delhi, only wholesale licenses are auctioned to the private parties and the retail is controlled by state agencies like the state Small Scale Development Corporation and the State Tourism Development Corporation. The license corporations in Delhi do not have to pay any Excise duty but a contract for sharing of profits is made amongst the Excise authorities, the licensee corporation and the private party whose premises have been hired for the retail shop. These retail licensees get their stock from the wholesale licensees. Before a person can be awarded the license, he has to present before the Excise authorities:

i. Solvency certificate issued by the district magistrate.

ii. Income-tax clearance certificate issued by the AO having jurisdiction.

12.4.1 Both the authorities are supposed to have made due enquiries before issuing these certificates and a reference to these certificates at the time of assessment may prove to be very useful.

12.5 Mode of Payment of License Fee: The total amount payable for the contract is called the license fee. Of this, 20–30% (varies from State to State) has to be paid by the person on the spot and the rest in equal monthly instalments.

12.6 There is no restriction on the quantity of liquor that a contractor is allowed to purchase on the strength of these licenses. For each consignment required by the contractor he has to obtain a permit from the Excise authorities who issue the same in the name of distillery/ depot thereof or the bonded warehouse of the Excise authorities as the case may be, and such distillery, depot or wholesale agent or the bonded warehouse as the case may be issues the mentioned quantity with permit for that liquor to be carried through the state and to the particular premises. The wholesale dealer/ agent collects his stocks the same way from the distillery or its depot itself and keeps these stocks in a bonded warehouse under the control of Excise authorities. The permit issued by the Excise authorities, is recorded in a register which gives following information:

i. Name of the contractor to whom issued.

ii. Permit number.

iii. Date of issue.

iv. Quantity authorised.

v. Name of distiller etc.

vi. Challan number of the distillery from whom the goods were later received.

vii. Date of sale by the distillery/ bonded house, wholesale dealer etc.

12.6.1 The rent on the bonded warehouse is payable by the contractor whom it serves. It is at this stage that the Excise duty is paid by the contractor and only on payment of this duty he can lift the goods and is thereafter authorised to sell them. The licensee has to maintain a stock register as prescribed and take out day to day balances which have to be certified by the Excise Inspector. License fee is apart from the Excise duty. The Excise duty is chargeable with reference to the quantity of liquor actually purchased by the contractor.

12.7 Mode of Purchase from Distillery: One of the contractors, who has larger number of vends is given the wholesale contract. Different vends are attached with the wholesale vendor. The wholesale vendor, then purchases from the distillery, the quantity of liquor for its own vends as well as for the vends attached with it. The permits for the purchase of liquor are issued in the name of that wholesale contractor, on distillery of the state. All such permits are issued on the various distilleries established in the state only and not on the distilleries of any other state.

This is with a view to ensure that revenue of the state from Excise should remain within the State. The distillery then sells the liquor and charges the distillery-charge plus the State Excise duty. The goods are then carried/ transported by the wholesale contractor to his district. The wholesale contractor makes necessary entries in the stock registers maintained and then he sells the same to the various retail vends attached with him. The wholesale contractor is allowed a nominal commission, as he simply passes on the goods to retail vends. Each contractor has to lift the quota sanctioned in the contract during the financial year so that the Excise revenue may not be lost by not lifting of quota and instead they may sell spurious liquor. Each contractor has to maintain a statutory stock register, which is periodically checked by the State Excise authorities.

12.8 Sale of Liquor: The retail contractors get their supplies of liquor from the agent appointed by the distillery, the wholesale dealer, the sale depot or the distiller/ brewery itself, as allowed by the Excise laws of the State. General practice followed by the distilleries/ breweries is to appoint one of the wholesale licensees as a stockist or sale agent for their brand(s) who in turn supply the same in the market. Or else, the producers may establish their own depots as per Excise laws of a particular State. Sale prices are generally determined by the Wine Merchants' Association of the region. The prices so determined are subject to review by the Excise authorities. The agents are paid fixed commission on the basis of sales contracted by them.

13. COUNTRY LIQUOR CONTRACTORS

13.1 Auction of Licenses: In the case of arrack or country liquor also rules and procedures of allotment and auction of licenses vary from State to State. But the system basically is the same, i.e. the country liquor contracts are auctioned every year in February or March of each financial year, for the contracts starting in next financial year. In some States contracts are given from June to May, or July to June, or October to September. The highest bidders are granted the contracts. In certain States, the highest bidder ensures that a minimum quota will be lifted for sale from the government depot, called 'minimum guarantee'. The bidding of contracts is done in each district by the Excise department regarding each vend. The name and number of vends in each district are already known to bidders. The quota of country liquor is also fixed for each vend. The contractor of that vend is required to lift that quota only, not less not more.

13.2 Mode of Payment of License Fee: Generally an amount equal to two months' contract money (License fee) is required to be paid at the fall of hammer. The balance amount is paid in 10 monthly instalments. In States like Tamil Nadu, the amount to be paid on the spot is 30% of the total bid.

13.3 The procedure described by the Commissioner of Income-tax, Bhopal, in his Circular letter issued on 24/11/1979 brings out the extent of money involved and the variations that exist from state to state. It is reproduced below:

> *"According to the rules, the person who deposits certain amount prescribed with reference to the last year's license fee, is only eligible to participate in the auction. Where the license fee last year was upto Rs. 10 lakhs, the earnest money to be deposited, to make oneself eligible to participate in the auction, is 6–12% and where the license fee was more than Rs. 10 lakhs, the EMD is 2%. Apparently there are many bidders and everybody has to deposit the prescribed amount with reference to the last year's license fee. It is an open secret that in big cities, the license fee is enormous. License fee for certain shops in 1979–80 was fixed at Rs. 90,50,000/-. In the earlier years also the license fee must be in the vicinity of this amount and as such, each competitor was required to pay an earnest money of about Rs. 9 lakhs to make himself eligible for the*

bid. The amount of earnest money may differ from year to year and is verifiable from the records of excise authorities. Of course, the earnest money in the case of unsuccessful bidders is refundable immediately. The successful bidder has to deposit immediately 1/6 of the license fee (and he gets a setoff of the earnest money deposited by him earlier to make himself eligible to bid). After 10 days of the auction, the successful bidder will have to pay a further sum equal to 1/12th of the license fee. In this way for a contract of Rs. 90 lakhs, the successful bidder will have to deposit in all Rs. 22,50,000/-before starting the business. The contractor has to pay the cost of the empty bottles to the Distillery contractor in addition to the sealing charges. Thus he must have sufficient liquid funds to carry out the day to day business in addition to the deposit made."

13.4 For running the contract a minimum quantity of liquor is to be lifted, though the contractor is free to lift more than the minimum prescribed. Country liquor is measured in litres and is available in sealed full bottles, half bottles (adha) and nips to be sold to the public without opening the seal. If a contractor is found selling the liquor loose, the DEO is empowered to book him and compound the offence by imposing a fine. In case of repetition of the offence, the Collector is empowered to re-auction the contract, but such cases have never come to notice. The contractor is free to fix the rates of each brand, but the same are to be indicated on the notice board. These rates are to be intimated to the DEO as these rates form the basis for inspection by the district Excise authorities.

13.5 The contractor has to maintain a record of daily transactions, especially of receipts and sales. A register of empty bottles and an inspection register are also maintained by the contractor for producing before the Excise authorities on demand. Any deviation found during inspection is recorded in the inspection register. Besides the above registers maintained by the contractor, the DEO has to maintain P-5 register normally known as 'Profit and Loss Register'. On inspection, the Excise Inspector notes the prevailing selling rates shown on the notice board. This register also shows receipt and sale of liquor. A record of the quantity of liquor issued and the supply rates, is also maintained by the warehouse authorities.

14. TAX INVESTIGATIONS

14.1 Status of Assessee: In the case of liquor contractors dealing in India-made foreign liquor, one important aspect is the status of the assessee under the Income-tax Act. Bidding in auctions is done by individuals generally as independent persons and it is after allotment of a license that they take in other persons to form firms and seek registration thereof. The Punjab & Haryana High court in *CIT vs. Hardit Singh Pal Chand* and others reported in CTR (February 1979) page 365, considered the question of granting registration to a firm engaged in liquor business where the names of all persons subsequently taken as partners are not mentioned in the license. The High Court held that since the names of eight strangers to the liquor license, had not been endorsed on the license in terms of Rule 37 (26) of the Punjab Liquor License Rules 1956, the firm was not entitled for registration under Income-tax Act, as it carried on business of selling liquor in violation of the Punjab Excise Act, and the conditions of the license. This view was upheld by *Supreme Court in Biharilal Jaiswal vs. CIT* 217 ITR 746. Supreme Court held that a partnership formed in contravention of State Excise enactment is unlawful and void under Section 23 of the Contract Act. A licensee under the Excise Act of a State, transferring the license to a firm in which he is a partner without informing the Excise authorities, would disentitle the firm to registration under Income-tax Act.

14.2 Source of Payment of License Fee and Excise Duty: The actual date of payment of license fee, particularly the initial deposit, and not the date on which it is entered in the books is the crucial date. The availability of cash on that

date and its ultimate source must be thoroughly enquired into. The cash might be shown as passed through four or five channels before it reached the assessee. Therefore, the source of source at each stage and the manner of transfer must be explained by the assessee. Recent investigations in Karnataka have revealed undisclosed/ benami deposits as the source of the earnest money deposits. The AO may get the details of payments by the successful bidders from the state Excise department and examine the source.

14.3 Suppression of Sales-IMFL Contractors: Although IMFL have to maintain stock register which are subject to periodical checks by Excise officials, it is through suppression of sales that profits are concealed. Although the rates may be fixed by the Wine Merchants Association, the actual price charged depends on the general laws of economics-charge as tariff can bear. However, the contractors show sales at uniform rates throughout the year. Although cash memos are required to be issued and sales are expected to be vouched, in practice they are never issued. Instead cash memos are generally prepared at the end of the day showing sales in bunches. One liquor contractor confided that generally one cash memo is prepared after every four or five customers whose names in any cases are not mentioned. In case of a liquor contractor, the accounts were found foolproof and purchases as well as sales were fully vouched. On close scrutiny of sale vouchers these were found to have a peculiar pattern. The first four vouchers were all of full bottles, and next four vouchers of pints, and so on. Similar was the case with the brands. The system had been followed by the contractor consistently throughout the year. When this was pointed out he had no explanation. The accounts were rejected and income assessed at a higher figure was sustained in appeals.

14.4 Suppression of Sales

14.4.1 Country Liquor Contractors: Country liquor contractors are generally assessed from year to year on estimate basis following the old history of each case. The estimate is never based on any reliable material and even major changes in facts and circumstances are often not utilised in favour of Revenue. The contractors generally plead non-maintenance of accounts. Even where they are maintained these do not reflect the correct position. Since correct income cannot be deduced from incomplete past history without taking into account the material relevant to the given year, such estimates, are generally reduced in appeals citing lower profit rates in other cases. The subsequent assessments are framed on the basis of that appellate decision, without collecting additional material from Excise authorities. Cases exist where assessments were completed mechanically with sales at 2–1/2 times (in some case 2 times and even 1–1/2 times) of the license fee and net profit at 8% (even 6%) resulting in apparent underassessment. Some important ITAT decisions relevant for country liquor cases:

14.4.2 Rejection of Books of Account: In *ITO vs. Omprakash Premchand & Co (Indore)* 26 TTJ 286 and *Chamanlal & Co vs. ITO* (Chandigarh) 53 TTJ 241, books were rejected by the AO since sale vouchers were not maintained. But the ITAT cancelled the rejection of books since the AO had not disputed the quantity of purchases and the assessee had maintained a stock register the authenticity of which was not challenged by the AO. In *ITO vs. Iqbal Singh Taranjit Singh* 26 TTJ 4(Delhi) a country liquor dealer committed offences like adulteration of liquor by mixing water, overcharging of sales, sales on dry days etc. for which penalties were levied by the Excise Department. The ITO rejected the books and estimated the profit. The ITAT confirmed this.

14.4.3 Estimation of Profits: In *Rooplal Danchand vs. ITO* 10 TTJ 244 (Jaipur), gross profit from country liquor was estimated at 9% for AY 1974–75. *In Muvattupuzha Liquors vs. ITO* 54 TTJ 489 (Cochin), net income was estimated at Rs. 2.25 per litre of arrack for A.Y. 1985–86.

14.5 Investigation in Cases of Unsuccessful Bidders: Most aspects of the trade are common to both IMFL and country liquor contractors. Every bidder has to deposit prescribed amount through demand draft. In big cities where the license fee is quite high, each bidder is required to deposit a large sum as earnest money. Two types of bidders participate in these auctions i.e. genuine and bogus. The bogus bidders though not interested in having the contract, come forward to blackmail the genuine bidders. As soon as they receive the expected hush money, euphemistically called goodwill, they withdraw from the auction. It is reasonable to suspect that these bogus bidders would not come forward with their real names or the names of their business concerns, but would operate in benami names. A proper enquiry immediately after the bid, will bring to surface the real parties behind the unsuccessful bidders. The investment of the initial deposits and their source can thereafter be investigated in the hands of real parties. It is quite likely, especially in the case of benamidars that a substantial part of the initial deposits will be unexplained. Thus it is useful to obtain lists of unsuccessful bidders for enquiring into the real bidders and source of investment of huge sums deposited initially. Incidentally, payment made to rival bidders to withdraw from the auction for right to vend arrack is not a deductible expenditure in the accounts of the successful bidder. *CIT vs. Bangalore Arrack Co.* 201 ITR 25 (Kar).

14.6 Investigation in the Case of Successful Bidders: A successful bidder has to deposit the further sum as soon as the auction is concluded in his favour and subsequently on the 10th day of the auction. Besides, he needs substantial amount to run the contract. He has also to file solvency certificate (which may reveal assets not disclosed). To build up capital, bogus creditors are introduced in the knowledge that, the Income-tax department would if at all, enquire about these things only after the end of the accounting year. If the contract is in benami names whereabouts of the real owner would not be available by then. Therefore, it is useful to carry out survey under Section 133A and record statements of the concerned persons on oath under Section 131, covering benami contract, investment, cash credits, source of investments, etc.

14.7 Utilisation of Excise Records: The Excise authorities maintain full record of the quantity of liquor supplied separately for each brand and the rates charged. The contractor also shows the selling rates as required by law. This information is available from the warehouse, P-5 registers, and is normally available with the assessee also as he has to maintain a receipt and sale register. The assessee has to bear selling charges of 40 paise for a bottle and 30 paise for a half bottle/ nip. Each bottle, half bottle and nip (quarter bottle) contains 750 ml, 500 ml and 250 ml of liquor respectively. This information is useful in working out the correct amount liquor issued in sealed bottles. The contractor may not mislead by saying that full bottle contains 750 ml and half and nip contain 375 and 188 ml respectively, as the names suggest. The total sales can be worked out when the quantity of liquor issued and purchase/ sale rates are available. Other reasonable expenses like freight and overheads can easily be estimated after examining the expenditure claimed by the contractor under each head. It is also observed that the same parties go on obtaining contract of a particular group of liquor shops at higher and higher bids year after year. This indicates that the contractors had earned higher profits than the income returned/ assessed on the basis of estimate. The assessments can therefore be framed on a more scientific and rational basis by using the material available in Excise records.

14.8 Packing Material: Manufacturers of beer spend huge money on packing. Purchase of bottles in which beer is marketed is shown as purchase of either packing material or plant, and either the entire cost of purchase or hundred per cent depreciation is claimed as deduction. However, such beer is sold by these

companies without bottles since bottles are liable to payment of excise duty and sales tax, and such levies increase the cost of manufacture of beer for purposes of excise levy. The manufacturers therefore take some deposit on the bottles and account for only sale of beer. The bottles are shown as stock-in-trade lying with the customers. The deposit received on the bottles is shown as liability payable to the customers on return of bottles. However, more than 60% of the bottles are never returned by the customers. The bottles continue to be in stock-in-trade and the deposits continue to be in the liabilities. In the case of one of the major manufacturers of beer it was found that the deposits were continuing for over 40 years and it kept increasing every year. In fact the deposit received should have been taken as sale of bottles and added to the turnover. The assessee accepted the addition made on account of bottle deposits which were lying with it for a number of years as customers had not returned the bottles.

14.9 Sales Promotion: Likewise, beer manufacturers spend huge sums of money on sale promotion. In many cases, the manufacturers authorise the dealers to spend towards sales promotion. The dealers in turn book bogus expenditure by debiting fake bills for which the manufacturers send credit notes to the dealers. In one of the dealer's cases it was found that he was getting credit notes from the manufacturer towards sales promotion and was showing in his books that the amounts were spent by debiting bills from Mumbai. Investigations in Mumbai revealed that the concerns who were claimed to be the suppliers of sales promotion materials never existed at the addresses given. Although the dealer had made the payments by drafts, these were encashed immediately after the proceeds were credited to their accounts. The additions were accepted by the dealers.

15. TAX EVASION IN COUNTRY LIQUOR CASES

15.1 In some cases of liquor contractors the sales were estimated at 2–1/2 times of license fee in the absence of books of account and net profit rate of 8% applied. This was upheld by the appellate authorities. Generally, accounts maintained by liquor contractors are not reliable and have to be rejected. Provisions of Sections 145/ 145A are applicable in such cases and income should be assessed by estimating sales and applying a reasonable profit rate. The rate so applied must be maintainable on the basis of past history of liquor cases in the area comparable with the market conditions in that particular year. In certain cases in Delhi gross profit rates of 24 to 28% have been declared by the assessee. The AO should not be taken in by the assessee's plea of higher license fees to justify lower results because the price is always adjusted keeping in view the license fee paid by the contractor.

15.2 Manufacturers of IMFL incur huge expenditure on bottles, caps, cartons etc. There have been instances that expenditure on these packing materials is inflated. For this the number of dozens of bottles purchased has to be compared with that of IMFL sold and in stock. This analysis will give a fair idea whether the expenditure is inflated or genuine.

15.3 Liquor manufacturers are often found indulging in unaccounted production and sales outside the books of account. No Excise duty is paid on such unaccounted sales. The goods sold in such a manner are popularly known in Karnataka as 'seconds'. Though all stages of production and removal of goods from the factory are carried out under the direct supervision and control of state Excise authorities, unaccounted production and sales are resorted to either with the connivance of such authorities or by circumventing such controls, by taking advantage of various loopholes. One common method is the use of duplicate excise labels. By law the labels for the finished products are required to be approved by Excise authorities and they contain running serial numbers as allotted by Excise authorities. Records are maintained by Excise authorities regarding the range of

serial numbers allotted to a manufacturer, and also the range of serial numbers used for each consignment removed from the factory after payment of the Excise duty. However, this is circumvented by liquor manufacturers in respect of unaccounted production by affixing duplicate Excise labels. Sometime the same number is used three/ four times indicating the extent of unexcised production. During a search operation in the case of a leading IMFL manufacturer in Bangalore, duplicate Excise labels were found in the assessee's premises. The labels contained two series of label serial numbers and on cross verification with excise records, it was found that only the first series of Excise label numbers were allotted to the manufacturer, but this series had already been utilised for a consignment cleared by the Excise authorities earlier. It was also found that the second series of label serial numbers had not been allotted to this manufacturer by Excise authorities. Thus it was possible to estimate the unaccounted/ unexcised production.

15.4 Another area for verification is the transport of finished goods. Whenever any consignment of finished goods is required to be dispatched from the factory, the manufacturer has to obtain Excise gate pass from the Excise authorities after making necessary payment of Excise duty in respect of goods to be removed. However, the manufacturers remove the unaccounted goods from the factory by utilizing the same gate pass for more than one consignment. Such unaccounted goods are normally transported without valid transport documents with the help of unorganized transporters, who are close confidants of the manufacturer. During the search operation of a leading IMFL manufacturer in Bangalore, the transporter concerned was also simultaneously searched and a diary containing details of unaccounted goods transported by him was seized. The diary contained details such as date, factory from where goods were lifted, the party to whom goods were delivered, number of cases of liquor transported and the freight charges received. Most of the liquor manufacturers whose unaccounted goods were transported by this transporter and whose details were found in the diary, accepted the noting found in the diary.

15.5 The excise contractors in Karnataka follow a particular pattern of conducting the business put into practice for a number of years. All business transactions including obtaining tax clearance certificate are done in the name of a benami, who might be a close relative or employee. This is primarily to cover themselves from any untoward Excise/ police actions. The contractors use benami names to evade excise rentals. They pay Excise rentals for 8 to 9 months and keep the balance outstanding. Since business is in the name of a benami who does not have proportionate assets it is difficult to recover the outstanding rentals. The Excise department now insists on bank guarantee of 3 to 4 months rental to counter this. Another use of benami is to outsmart competitors in Excise bidding.

15.6 Another area is the nature of the Excise levy which involves parallel 'seconds' transactions for which illegal gratification is paid to the concerned agencies, called 'monthly mamool' or M.M. The Excise contractor would not like to soil his hands in such illegal payments and hence a benami is used.

15.7 The benami method is also being used to earn of goodwill. Goodwill is an amount paid by the successful bidder to the other participants in the bidding as a consideration for tacit understanding that the other participants will not make a call, over and above the amount quoted by the successful bidder. Thus, the successful bidder can manipulate monthly rentals to maximize his profit. The other participants are benamis of the other contractors. Therefore, more the number of benamis, higher the goodwill. It can be seen from the Excise bidders from a particular taluk, the same Excise contractor will be filing EMD in the names of 3–4 benamis.

15.8 'Seconds' play a major role in liquor trade. In a search case, the income from 'seconds' business was found to be very high, sometimes 5 to 6 times of the accounted profit. As per the prevailing Excise rules, arrack has to be sold only in sachets sourced from government agencies. The accounted source for arrack are the government agencies (Mysugar and MSIL in Karnataka). As per market information, these agencies give unaccounted arrack generally called leakage, which are additional arrack sachets, over and above accounted sachets. The Excise contractors get rectified or neutral spirit from sugar industries, which is then supplied to vendors as bulk arrack. The AO should keep himself informed of these tricks of trade.

15.9 The Investigation wing in Kerala came across instances of under-filling of arrack in 100 ml bottles. In surveys under Section 133A at retail vends, it was found that the bottles were filled with 60 ml arrack only, thus saving 40 ml arrack per bottle. The corresponding sales are not accounted. Empty IMFL bottles and labels were found in the vends during surveys. The bottles were admittedly meant to be filled with arrack, which tinged with an essence for IMFL flavour, is passed off as IMFL.

16. COUNTRY LIQUOR

16.1 Country liquor is always adulterated with water, sugar and chloral hydrate. Chloral hydrate mixed with country liquor is highly intoxicating. It is injurious to health. Adulteration of country liquor with the chemical is forbidden though sugar is permitted. The books produced never accounted for sugar, chloral hydrate etc. As other expenses such as wages, purchases of bottles and boxes, salaries, etc. are not properly vouched and verifiable, the books were rejected and net income is worked out accordingly.

16.2 As the Excise contractors were making huge profits by adulteration, the baitak/ bid amount was raised each year, though the number of trees remained same. For several years a situation arose that though the assessees were paying higher bid amounts they were incurring losses. This was because the sendhi collected from trees was never sold as it is. Instead, a very large volume of sendhi was prepared in the depots by mixing the daily collection of sendhi with water, sugar and chloral hydrate. The sendhi finally sold in retail contained only a small quantity of the juice and contained large quantity of water, sugar and chloral hydrate. It is an open secret that a small amount of chloral hydrate is mixed to prepare a large volume of sendhi out of a small quantity of juice. But this is never admitted by the contractors and Excise officials for obvious reasons. In the process, the contractor accounts only part sales while the major part goes unaccounted. Local reports show that unaccounted sales are much more than the disclosed sales. It was widely alleged that Excise officials are not bothered about adulteration. Now there seems to be a strict vigil by the Excise Department to book Excise contractors found adulterating sendhi with chloral hydrate. In the trading and accounts filed the expenses on sugar are debited while the cost of chloral hydrate is omitted.

16.3 The contractors employ tappers who tap and collect sendhi from allotted trees normally spread over more than 100 sq. kms. The sendhi collected is brought to a depot where it is adulterated and bottled before dispatching in boxes containing 24 bottles each, to 40–50 nearby villages for retail sales. The expenditure incurred is towards salaries of tappers, lorry charges, purchase of bottles, making of wooden boxes, labour charges etc. The quantity of water mixed, the number of bottles dispatched to various centres, the sales at various retail centres is not recorded anywhere.

16.4 It was not possible for the department to lay hands on the unaccounted quantity and its sales. The contractor keeps selling agents at different places notified as retail centres by the Excise department. Selling commission is paid to the agents at fixed rates on each box of bottles.

No stock account is maintained for the yield of toddy from trees. Since assessments on the basis of yield as in past, did not result in any profit the basis was changed and estimate of net income is made in respect of each tree. As the real sales could not be detected, the estimate of net income was found to be acceptable to the assessees and the department. Since this generally resulted in underassessment, the contractors were also satisfied.

16.5 The names of successful contractors are available in Excise records. Normally, the contractors produce a certificate from Excise department showing names of contractors and the bid amount paid during the year. Apart from this, each contractor is supposed to pay tree tax at Rs. 10/- per tree. Sometimes, the toddy/ sendhi trees are located on private lands. The private land owners are forbidden to remove the trees and the government has right over these trees for collection of sendhi. The tree tax is collected by the Excise Department from the contractors in respect of trees standing on government lands.

16.6 The contractors are known to be giving huge amounts to political parties and bigwigs connected with their business. The books maintained in the depots are normally produced before the AOs for assessment purposes. The books showing the real profits are not kept at the depots. The main persons entrusted with the business are in the depots day and night by turns to take stock of the unaccounted sendhi sent out and the collection therefrom, apart from supervising the day to day business and accounts for Income-tax purposes. The books for unaccounted sales are maintained secretly by these persons.

16.7 In a case for A.Y. 1971–72 the exclusive privilege of retail sale of toddy was given at monthly rentals of Rs. 9,99,999/-. The total rental for the year came to over a crore of rupees. There were some disputes between the successful bidder on the one hand and the State of Mysore & Others. The contention was that the successful bidder was a benamidar who drew a monthly pension of Rs. 75/- only and that he was never an Income-tax assessee who could invest Rs. 40 to 50 lakhs. The Supreme Court in civil appeal No 2095 of 1978 dated 5/12/1978 held that it was not possible to record a finding that the successful bidder was a benamidar and that some other person was the real purchaser, even though the Court did not doubt that the bidder was backed by powerful financiers. In the assessments a few persons form a partnership and bid for the contracts in the annual auctions. They pool up not only their resources but also the borrowals made by each partner from friends and relatives. Affidavits are produced at the time of assessments from the creditors. It is learnt that in some years the sendhi contractors incurred losses but cooked up the accounts and showed profits so that the capital in the business is not diminished to create problem for explaining the sources of funds invested in the following year. The unaccounted profits of earlier years continue to flow in the business in spite of disclosed losses. The credits introduced always bear interest. From the partnership deeds it is seen that sometimes the main partners or the real partners have nominal share along with persons who did not have anything to do with the business. The main partners sometime do not even remain as partners but control the day to day business.

16.8 The sale of sendhi is mainly to lower economic strata of society and as such the business is managed by the hard-core in the society. The depots adulterating the toddy are always located on the outskirts of the town. A detailed investigation is necessary to detect the unaccounted sales. Information can be obtained from the state Excise office in respect of:

i. Names of the successful contractors to whom the contract was given.

ii. Baitak or monthly rental paid.

iii. Number of trees allotted and number of trees tapped.

iv. Tax paid for the trees tapped.

v. Cases booked against the contractors for Excise offenses.

vi. Selling rate of sendhi.

This information should be checked at the time of examination of accounts with a view to find out the real partners, number of trees auctioned, number of trees tapped, payments made by the contractors. The contractors or the partners may have to be watched for investment of unaccounted money derived from the contracts, as invariably all the partners in the business are not real partners and some of them are benamis.

16.9 A major part of the capital is usually financed by banks on securities given by the contractors. The properties given as securities to banks have to be verified with Income-tax records. Sometimes persons other than the contractors give security of their properties for financing the Excise business. Such persons are normally found to be the main contractors doing the business from behind the scene. This needs to be probed to find the real owners.

17. CONCLUSION

Liquor industry is highly growing industry and has a shadow market. Revenue from the Indian Alcohol industry is large yet, for the most part, non-transparent and hard to be tracked from a Balance Sheet. On liquor product State Excise is applicable, which is very high. Therefore, there are more chances of leakage of revenue. The Assessing Officer has to understand manufacturing process of product and after collecting the relevant fact of the case and region of assessee decide the line of investigation with help of basic understanding given in the topic.

CHAPTER 11

Paper Industry

1. INTRODUCTION

1.1 Paper is essentially a mat of cellulose fibres bound together with additives. The word owes its origin to 'papyrus', a plant which grew abundantly in the Egyptian delta. History has it that the barks and leaves of this plant were woven and pressed into a sheet to form a crude type of paper by the ancient Egyptians. It is believed that the art of paper making was invented by the Chinese around the second Century B.C. and it reached the Indian subcontinent through the Arabs, who initially learnt it from the Chinese.

1.2 Today paper is, so to say, more than an industrial product. It is the cultural barometer of a nation. The per capita paper consumption in India today is estimated at around 13 kg while the global average is over 57 kg. In advanced countries, the consumption is over 100 kg. The demand is further expected to rise in India as the economic progress would give rise to significant rise in per capita disposable income. Considering the present literacy rate, it can fairly be expected that we would see higher paper consumption in days to come. In the age of e-commerce, packaged delivery of commodities is going to enhance paper consumption to a great extent. As per the present policy, FDI upto 100 per cent is allowed on the automatic route for the pulp and paper sector. However, the per capita consumption of paper in India is about 13 kg. which is much lower than the world average of 58 kg. The Indian paper industry is in a fragmented structure, consisting of small, medium and large paper mills having capacity ranging from 05 to 1500 tonnes per day. There are around 850 units which manufacture pulp, paper, paper board and newsprint with an installed capacity of 25 million tonnes out of which 3.5 million tonnes are lying idle.

1.3 As per The Indian Paper Manufacturers Association (IPMA), the paper industry today accounts for an estimated direct employment to 5 lakh persons, and indirectly to around 15 lakh, and has an annual turnover of about INR 60,000 Crore. The domestic market/ consumption of paper is over 17 million "tonnes per annum" (TPA), with over 3 million TPA being imported. By 2024–25, under the baseline scenario, domestic consumption is projected to rise to 23.50 million TPA (in the optimistic scenario, consumption is expected to rise to 36.90 million TPA by 2024–25).The association has estimated that 1 million TPA of integrated pulp, paper and

paper board capacity has to be created in India on an annual basis over the current capacity to meet the growing demand. They have also estimated that such investments would create a multiplier effect on the economy through gross capital formation of INR 8,500 crore every year, direct employment to 15,000 people every year and further giving additional livelihoods of 72 million man days per year (for people involved in farm forestry). This projected growth trajectory brings out the revenue potential of the industry.

2. TYPES OF PAPER

2.1 The most widely used classification of paper is cultural paper and industrial paper. Paper used for writing and printing is called cultural paper. Industrial paper is used for industrial purposes as against paper used for writing and printing, or that used for facial or sanitary tissue papers. Prime examples of industrial paper are liner board; corrugating medium and bag paper. Paper can also be broadly divided into two categories: Paper and Board. This classification is based on weight in terms of grams per square metre(GSM) and the manufacturing process of either is classified depending on the end use. The classification is as follows:

i. Newsprint.
ii. Printing Paper-White printing; Colour printing; Litho/ Offset; Duplicating etc.
iii. Writing Paper-Cream Wove; Drawing and Cardige board; Bank bond etc.
iv. Wrapping Paper-Kraft; brown etc.
v. Tissue-White; coloured etc.
vi. Special Paper-Cigarette tissue; Art paper; Blotting paper etc.
vii. Rag Papers-Account Book; Manifold paper etc.
viii. Boards-Duplex/ Triplex/ Ticket board etc.
ix. Special Board-Chrome board; Art board etc.
x. Straw Board-Mill board.

2.2 After introduction of GST tax regime, GST rate for Paper, Paper Board & Paper Products fall under five rates: NIL, 5%, 12%,18% and 28%. GST rates are also based on HSN Code (Harmonised System of Nomenclature), the globally adopted system for classifying goods in international trade practices.

3. PAPER INDUSTRY IN INDIA: A BRIEF SWOT (STRENGTH, WEAKNESS, OPPORTUNITY AND THREAT) ANALYSIS

3.1 Strength: Paper industry is one of the oldest industries in India. The industry's fundamentals are strong. The installed capacity over the years shows a rising trend.

3.2 Weakness

i. Wood prices in India are higher.
ii. Infrastructure continues to be a major bottleneck in the movement of raw materials and finished product.
iii. Interest rates are quite high.
iv. Stringent environment norms and scarcity of basic raw material (wood/ bamboo).
v. Comparatively lower return against huge initial investment.

3.3 Opportunity: Expected rise in consumption as the per capita consumption is very low today. Paper is a biodegradable product. It has no real competitor. Plastic, once perceived as a substitute for paper no longer poses the challenge because of its environmental hazards.

3.4 Threat

3.4.1 Since the initiation of the policy of economic liberalization, the government has been reducing import duties. This has led to rising imports of both paper and newsprint. The fall in international newsprint prices has also contributed to growth in the import figures. Rising Import again resulted in:

i. Low capacity utilization of domestic manufacturing units.

ii. Huge losses even for large manufacturers.

iii. Deferment of modernization of expansion due to resource crunch.

3.4.2 As already mentioned, the issue ringing the alarm bell is the environmental issue. The industry is yet to tackle the environment issue successfully and tune itself to the concept of sustainable development. Here the points involved are:

i. Paper industry is held responsible for depletion of forests.

ii. Consumption of water to great extent.

iii. Pollution issue.

iv. The industry is energy-intensive and efficiency is yet far below than that in developed countries.

3.4.3 Another issue of concern for the industry world over, is that with the revolution of information technology, the work environment is turning 'digital'. It will have an impact on the future demand. However, keeping in view the fact that the average consumption of paper in India is far below the international standard and literacy is on the rise, there is a scope for future growth of the industry, which again has revenue implications for the taxing authorities.

3.4.4 Presently India is heavily dependent on import supply of pulp and wastepaper as raw material. The comparative figure (in value Rs: Crore) for the past four years is as below:

Table 1: Import Figure in India

(*Fig. in Crores*)

Commodity	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Pulp of Wood or of Other Fibrous Cellulosic Material; Waste and Scrap of Paper or Paperboard.	6991	8379	10323	10699	11088	13592	18321
Comparative (Increase Decrease in% over the previous year)	7.14%	19.86%	23.21%	3.64%	3.63%	22.59%	34.79%

(*Reference:* Website of Ministry of Commerce-link-http://commerce-app.gov.in/eidb/Icomq.asp?hs=48)

3.4.5 Proper focus on systematic retrieval mechanism of recycled paper can address the huge revenue outgo on this count.

4. MANUFACTURING PROCESS

4.1 Manufacturing process in paper industry can be broadly divided into two stages:

i. Pulp making from basic raw materials or pulp making from recycled paper.

ii. Conversion of Pulp into paper of desired quality.

4.2 Main Inputs: Basic raw materials, other fibres, chemical & additives and fuel are the main inputs in the production process. These are described below:

4.2.1 Basic Raw Materials: The raw materials used by Indian manufacturers can be divided into following categories:

i. Forest-based: Wood (from eucalyptus trees), bamboo.

ii. Agro-based: Bagasse (waste from sugar mills), wheat/ rice straw, jute.

iii. Secondary fibre-based: Waste/ recycled rags, gunny bags, old rags, cotton waste.

iv. Delinked pulp-based: Recycled papers.

In addition, some mills manufacture paper from imported virgin pulp.

4.2.2 Other fibres used are grass string, babul grass, paper and tailor cuttings, rags, and wood pulp.

4.2.3 Fillers: China clay, talc powder, and soap stone powder are used as fillers.

4.2.4 Coating and surface sizing materials:

i. Starch
ii. Glue
iii. Rosin
iv. Soda ash
v. Cream caustic
vi. Dispsonil
vii. Alum
viii. Coating clay & SF clay
ix. Salt cake
x. Carbide sludge
xi. Liquid chlorine
xii. Caustic soda
xiii. Caustic liquor

4.2.5 Dyes: These are used for colouring

4.2.6 Additives

i. Silicate of soda
ii. Sodium sulphate
iii. Guarton
iv. Cellpro
v. Manganese sulphate
vi. Ferro cyanide
vii. Sulphuric acid
viii. Acetic acid
ix. Titanium dioxide
x. Higum

The above chemicals and additives are used in the Paper manufacturing process.

4.2.7 Fuel: Coal, pitch, wood dust, lignite, oil, bio-fuel, bio-gas, leco are used as fuel. In addition large quantity of water is required.

5. DESCRIPTION OF THE MANUFACTURING PROCESS

5.1 The manufacturing process of a typical plant engaged in production of writing and printing paper converts the basic raw materials into pulp and finally to paper reels or sheets.

5.2 A typical paper factory includes the following:

i. Bamboo Chipping Plant
ii. Pulp Mill
iii. Paper Machine
iv. Chemical Recovery Plant
v. Power Plant

5.3.1 Bamboo Chipping Plant: Chipper House: Bamboo or wood is fed into the chipper. This machine is basically a drum or a rotor filled with knives called fly-knives and also one knife fixed to the body of the chipper called 'dead knife'. Raw materials to be chipped are passed through the fly-knives and dead-knife for cutting into small pieces. The output of chipping is subject to screening through Decker Screens and washed Bamboo dust is a bye-product in this process if the raw material used is other than bamboo or wood, then also it is divided into small pieces in the chipper.

5.3.2 Pulp Mill: Bamboo chips are first de-aerated by process steam and impregnated by treating with "*white liquor*". Following are the processes:

i. **Digester Cooking and Washing:** The raw material so converted into small size is cooked in the pressure vessel known as digester. For the purpose of cooking, liquor containing sodium hydroxide, sodium sulphate and sodium carbonate is used. This is commonly known as white liquor.

The white liquor once used is recovered back from the spent liquor known as black liquor. The digestion is carried out for three to six hours under pressure range 3.5 to 7.5 kg/sq. cm. White liquor at a temperature of 160–175 degrees centigrade is circulated through the chips for cooking. The purpose of cooking is to eliminate lignin and other wood components leaving cellulose fibre behind. The whole cycle of heating, cooking and blowing the pulp to the pulp-storage tank, called blow-tank is completed here.

ii. **Washing and Screening:** The mixture of unbleached pulp and black liquor is passed on to 'screens.' The purpose of screening is to catch undigested bamboo/ wood chip and their knots. The screened pulp and black liquor are then fed into a battery of washers known as Brown Stock washers. The black liquor is completely washed out and freed from pulp in these washers and collected in storage tanks. The liquor is taken from here to the soda recovery process for conversion into white liquor. The uncooked knots are sent for re-cycling to the digester. The washed pulp known as unbleached or brown pulp is used in unbleached varieties of paper. For making white paper, the unbleached paper undergoes bleaching. The screened pulp is then passed through sand-traps, rifflers, and centri-cleaners for removing sand and other impurities.

iii. **Bleaching:** For manufacturing bleached paper, the pulp is required to be bleached with different chemicals. Normally, these are chlorine gas; chlorine-dioxide, hypo-chlorate, oxygen alkali, bleaching liquor etc. Generally, the pulp is bleached in three stages consisting of chlorination, caustic extraction and hypo stages of chlorination. However, the use of chlorine and its impact on the environment have been the subject of contemporary debate. The ECF (Elemental Chlorine Free) and TCF (Totally Chlorine-Free) bleach sequences are yet to be in used in India.

5.3.3 Paper Machine: The unbleached and bleached pulp thus obtained cannot be used as such for making of paper; it requires further physical and chemical treatment. In the paper machine, the pulp is first sent to a Section called the Stock Preparation Section. After the physical treatment of refining and brushing, sizing chemicals like resin, talcum, broke etc. and other additives are mixed with the pulp to render strength to the paper. The types of additives, typical chemicals and their functions are described in the following table:

Different Wet-End Chemical Additives: Functional Additives

Table 2

Type of Additives	Typical Chemicals	Application
Sizing agents	Rosin size/ alum, ketene dimers, alkyl succinic anhydride	Imparts water penetration resistance to paper
Dry strength agents	Starches, gums, poly-crylamides	Increases paper dry strength (tensile, stiffness, etc.)
Wet strength resins	Urea formaldehyde, melamine formaldehyde, polyamine resins	Imparts increased strength to paper saturated with water
Fillers	Clay, talc titanium dioxide, calcium carbonate.	Improves optical and printing properties
Colouring agents.	Dyes, coloured pigments, optical whiteners	Imparts colours and tints to paper

Different Wet-End Chemical Additives: Chemical Processing Aids

Table 3

Type of Additives	Typical Chemicals	Application
Retention aids	Cationic and anionic poly-crylamides, alum	Improves retention of fines and fillers
Defoamers	Proprietary chemicals	Improves drainage, sheet formation, cleanliness, prevents foam formation and deposit problems
Slime control agents	-do-	Controls micro biological growth and associated deposit problems
Pitch control agents	Talc, alum, dispersants	Prevents deposition and accumulation of pitch
Drainage aids	-	Increases water removal rates
Formation aids	High molecular weight anionic polymers, gums, poly acrylamides	Improves distribution of fibres by decreasing fibre-fibre flocculation
Acids and base	-	Controls Ph
Specialty chemicals	-	Corrosion inhibition, flame proofing, anti tarnishing

The resultant output coming out is known as 'furnished stock'. The furnished stock is then passed through the "Flow System" where we get rejects in the form of sand, fibre etc. The stock travels through this Section in a highly diluted form. Much water is removed at this stage and what remains is technically known as 'Paper Web'.

5.3.4 Pressing and Drying: The paper web is then subject to pressing and drying by mechanical means. A pair of rollers known as wet press is used to extract as much water as possible. When the paper sheet comes out, it still contains 62–67% of water. The wet sheet is then passed on to the heated surface of rotary dryers which give air dry paper.

5.3.5 Calendaring: The sheet is then carried in between highly polished rolls stacked one over the other known as calender. The process of calendering imparts a smooth finish and gloss to the paper. During drying and 'Calendering' the web is treated with process steam, which reach the condensate stage and is re-used.

5.3.6 Reeling and Built: The paper sheet is then wound around a rotating shaft and a reel is build up. These reels are quite heavy and too wide to be used. By employing rewinding machine and using slicing tape, these reels are converted into smaller ones. As soon as sufficient quantity of paper has been converted into a roll, a fresh roll is started. Each roll is weighed and test-checked at this stage and the weight noted in the machine log-book. The small reels are next packed and stored in product warehouse. But the bulk consumption of writing and printing paper is in sheets of various sizes. For this, the reels are cut into sheets by passing them through cutters, the cutters trim the papers (Trims and broke are obtained as 'by-products' in this process). This apparent wastage is sent back for re-pulping.

5.3.7 Finishing Room: Trained personnel inspect the sheets here thoroughly, sort out the good ones and discard the defective ones. The defective ones are either rejected or made into seconds. The good ones are generally grouped together and wrapped into reams so that in each ream there are five hundred sheets. Next the reams are sent to the product warehouse for onward dispatch to customers.

5.4 Chemical Recovery Plant: Economy dictates that for larger paper plants of capacity 100 tonnes of production per day and above, chemicals used for cooking should be recovered for reuse in the product-cycle. For this a chemical recovery plant is essential. In this plant, black

liquor comprising sodium carbonate converted from sodium hydroxide, sodium sulphide, thiosulphate and lignin inorganic compound are produced. Heat generated in the recovery furnace is used for raising steam which can either be used directly in the process or can be used for power generation, or for both the purposes. The main equipments in the 'Soda Recovery Plant' are evaporator, soda recovery boiler, causticiser etc. Evaporators are heat-exchangers where steam is supplied to one, to affect the heating and boiling the black-liquor for evaporation whereas in the other, evaporation takes place by application of vapours from the previous effects and vacuum. Chemical recovery boiler is a normal combustion boiler with furnace capacity specially designed as to allow the burning of the black liquor without smelt deposits and by allowing the smelt to escape through the bottom of the furnace. In the Caustising Section, lime and filter is installed in the final stage to extract any residual chemicals left in the sludge so that there is minimum loss of chemicals. The recovery of Alkali by the Recovery plant is not 100%. There are losses at various points both in the pulp mill and the recovery process. And the loss is 8–12%. These losses are made up by adding Salt Cakes to the thick black liquor before burning it. Sodium sulphate is the make-up material. This is why the process of cooking with white liquor is known as sulphate process.

5.5 Transit Losses of Raw Materials: Ideal situation suggests that there would be no transit losses except reduction in moisture content, but in practice, due to distances involved, pilferage etc., transit losses of 5 to 20% occur.

5.6 Finishing Losses: Finishing losses vary from mill to mill and it depends upon the quality of managerial control, condition of machine etc. These vary between 6–12%.

5.7 Ware Housing

5.7.1 Receipt of Reams from Finishing House: After paper is finished and wrapped in reams and check-weighted, Finishing House prepares a Finishing report stating Lot No, quality, substance, size, ream weight and Net weight along with total number of reams. Distribution Section arranges to remove and transport the reams from Finishing lines to Product warehouse on daily basis. After all the reams have been received, the total number of reams received is tallied with the Daily finishing report and a "Production Receipt Sheet" is prepared. These production figures are used for maintenance of statutory GST Records.

5.7.2 Receipt of Reels from Finishing House: Subsequently slitting and rewinding of reels are done at reminder, the reels are packed with wrapper in the reel packing machine. Each reel is weighed and marked with Reel serial number, gross weight, and net weight and rolled to stitching area. The net weight of the reel is determined by deducting the tare weight from the gross weight. Tare weights of different widths for paper in reels have been standardized by the authorities are tabulated below:

Table 4

Size	Core Weight	Wooden Pulp	Wrapper	Total
Upto 40 cm	0.8 kg	0.3 kg	1.1 kg	2.2 kg
40.1–60 cm	1.0 kg	0.3 kg	1.4 kg	2.7 kg
60.1–80 cm	1.5 kg	0.3 kg	1.6 kg	3.4 kg
80.1–100 cm	1.9 kg	0.3 kg	1.7 kg	3.9 kg
100.1–120 cm	2.3 kg	0.3 kg	1.8 kg	4.4 kg

Further all the reels are delivered, Finishing House issues a "Finished paper delivery report" based on which a "Production receipt sheet" is prepared for recording in Register maintained for GST purposes.

5.7.3 Conversion of Reams Into Bundles: The number of reams received are converted into bundles as per the chart in "Balling Register". Generally a bundle weighs 65–70 kg.

5.7.4 Packing: Hessian cloth and jute twines were the traditional packing materials for packing of reams and reels. The average consumption of hessian cloth and jute twine per reel and bundle used to be as follows:

Table 5

Reel Width	Hessian Consumption
40 cm-69 cm	0.8 kg
70 cm-80 cm	1.0 kg
81 cm-91 cm	1.2 kg
102 cm	1.3 kg

The consumption of hessian and jute twine per bundle is 500 gm on an average. Nowadays, other synthetic material is used for packing.

5.7.5 Marking: After stitching, product specification and other details are marked with ink on hessian packings. The quality, lot no, GSM, size, ream weight, number of reams packed, Total weight of the contents are marked on each bundle. The reel serial no., quality, lot no., GSM, size, gross weight and net weight are given on each reel. After the passage of the Packaging Act in the seventies, it is mandatory to specify date of manufacture and ex-factory price also.

5.7.6 Stacking: After stitching and marking paper bundles and reels, these are stacked in the product ware house according to established guidelines and organisational practices. Stack Card is used on each stack indicating the product-specifications. Similar cards are also used on stacks of reels. The goods are then ready for dispatch and are removed from the factory premises on execution of supply order.

6. Apart from the paper manufacturing process from virgin raw material detailed above, the process in case of two other important types of papers, namely newsprint and paperboard, employed by a standard Indian company is detailed below.

6.1.1 Newsprint Machine Configuration and Manufacturing Process

6.1.2 Machine Configuration

A typical newsprint machine has the basic configuration of:

i. A deinking plant comprising two loop systems with both oxidative and reductive bleaching to achieve +58% brightness.

ii. Stock Preparation System Comprising, Chest Agitators, Pumps, Motors, Piping, Instrumentation and Controls.

iii. Approach Flow System Comprising Centri cleaners, Pressure Screens, Centri cleaner Feed Pump, Piping, Instrumentation and Controls.

iv. Head box.

v. Forming Section.

vi. Press Section.

vii. Dryer Section with unirun in first few group.

viii. Calendar stack with CC rolls.

ix. Pope Reel.

x. Rewinder.

6.1.3 Detailed Process Description and Machinery Details

6.1.3.1 Deinking Plant

i. The furnish for the newsprint is mainly the secondary fibre and hence, waste paper pulping with deinking is suitable.

ii. Waste paper has a considerable amount of contaminants such as sand, inks,

adhesives, hot melts, strings, and various kinds of bigger particles of metal, wood or plastic or other contraries, that must be removed before a quality recycled fibre can be produced.

iii. This removal process utilises various techniques such as pressure screening, flotation and combines them with other fibre enhancing operations, which are assumed to be performed by other parts of the system.

6.1.4 Raw Material Feeding

The required quantity of waste paper is stocked in the wastepaper feeding shed. Retrieval and feeding of waste paper to conveyor is mechanised using forklift trucks. While the local ONPs are in small bundles tied with ropes, the imported ONP and OMG are in bales tied with wires. To process the design raw material mix, the respective raw material will be handled separately and simultaneously. The bales are fed to the bale feed conveyor and the bale wires are cut and removed at the bale wire cutting station and the loosened bales fall on to the elevating conveyor. Local ONP bundles which are almost in loose form are pushed to the bale feed conveyor. The pulper feed conveyor will be equipped with load cells for tracking the weight of waste paper fed to the pulper. The conveyor will be adequately sized to feed the required quantity of both waste papers continuously.

6.1.5 Slushing

i. Repulping of the waste paper is carried out as a continuous process in a continuous pulper operating at a consistency of around 15%. The pulping cycle starts with the loading of baled waste paper from storage.

ii. The continuous pulper is a rotating horizontal cylindrical vessel with internal baffles with spout at feed and discharge ends and perforated screen at the discharge end.

iii. Due to rolling motion, sufficient force is generated between the impacts. Ink, dirt, lamination adhesive etc., are efficiently loosened and detached from fibre. With gentle shearing forces, the contaminants are retained as large particles without much disintegration making further cleaning operation easier.

iv. At the feed end a continuous water shower is provided to wet the waste paper and due to the gentle lifting and falling of waste paper, the waste paper is disintegrated and the slushed fibre passes through the screen at the discharge end and falls to the collection tank below. The water spray at the discharge end washes the plastics and other contaminants to reduce the fibre carry over in the reject. The chemicals, dilution water additions are controlled automatically through DCS.

v. During the pulping cycle, the required chemicals such as sodium hydroxide, sodium silicate, hydrogen peroxide, Diethylene Triamine Penta Acetic Acid (DTPA) and surfactants are added to the waste paper mix. The chemicals added during the pulping cycle have the following objectives:

   a. Aid in the wetting of the fibre for efficient defibering.

   b. Effectively detach the ink from the fibre surface.

   c. Provide pre-bleaching action on the fibre.

   d. Disperse the ink particles and hold them in a dispersed state for subsequent removal in the flotation stage.

6.1.5.1 The stock is diluted to get consistency of around 4% by addition of a measured quantity of dilution water.

6.1.6 Coarse Cleaning

i. The discharged stock from the pulper is collected in a dump chest. Agitation in

the chest blends all the incoming stocks, levelling out any consistency variations from the pulper.

ii. Stock from the dump chest is then fed on level control to the coarse screening/ cleaning feed chest. The stock is diluted to around 3 to 3.5% consistency in the coarse screening/ cleaning feed chest and then fed to the high density cleaners on consistency control, operating at a consistency of 3 to 3.5% and a pressure drop of 1.5 to 2 bar. The cleaners remove contraries of high specific gravity such as wires, staples, glass, sand etc. These rejectable materials are discharged intermittently from the bottom of the cleaner with the use of timer actuated back-to-back valves. A recirculation line in the accepts is provided to ensure a constant pressure drop across the cleaners. The cleaners are provided with elutriation water injection into the reject chamber, which washes any fibre entrained with rejects and returns the fibre to the accepts stream. The rejects are fed to a cleaner/ screen reject chest.

6.1.7 Coarse Screening

i. Accepts or the approved materials from the high density cleaners are fed directly to the inlet of the primary coarse screen equipped with a 1.6 mm perforated screen basket. The coarse screen removes relatively large light and heavy weight contaminants. Accepts from the primary coarse screen are fed to the cleaner feed chest. The rejects from the coarse screen are fed directly to the feed of the reject screen.

ii. The reject screen works in cycles controlled by the plant DCS. Over the screening phase, the stock is first introduced into the inlet chamber in which a specially made rotor revolves, ensuring the passage of fibres through a vertical screen plate with perforations (1.6 mm) which are thus cleaned.

6.1.8 Fine Cleaning

The accepted stock from the coarse cleaning is collected in a cleaner feed chest. Stock from the cleaner feed chest is cleaned in a four-stage fine cleaning system arranged in cascade arrangement. The fine cleaners remove very fine heavy impurities. Accepts from the screens are fed to the suction of the floatation cell feed pump. Rejects from the final stage cleaner are collected in the screen/ cleaner reject chest. The final stage cleaners are provided with elutriation water for minimising the loss of good fibre along with the cleaner rejects.

6.1.9 Flotation

i. Flotation is a physio-chemical process of separating materials. It is based on the phenomenon that separation is achieved by influencing the wettability of the particles to be separated, whether the surface of the particle is hydrophilic or hydrophobic. The water-repellency of the surface of the particles to be separated is achieved by the addition of special heteropolar chemicals, called collectors, which deposit on the surface of the particles. At the same time, the treated particles can deposit on air bubbles that are introduced into the suspension. As a result of the buoyancy of the air bubbles, the adhering particles are conveyed to the surface of the slurry or suspension to concentrate as froth, in which form they can be removed. All hydrophilic particles (i.e. fibres) remain in the slurry or suspension.

ii. Flotation deinking stages are effective in removal of particle sizes ranging from 10 microns to 100 microns.

iii. The fine cleaning 'accepts' are fed to the flotation cell at a feed consistency of around 1 to 1.5%. The flotation cell considered in the proposal is a multistage flotation cell. Accepts from each stage are re-circulated to the subsequent stage and the last stage accepts are fed to the

subsequent fine cleaning system. Rejects discharge is achieved through slight overpressure, which is adjustable and can be controlled without fibre being carried away in the form of foam. Flotation air is added through special injectors. The rejects line is connected to a cyclone, where air and ink particles are separated. The air is vented to atmosphere and the liquid flows to a sludge tank.

6.1.10 Fine Screening

i. The fine screening system comprises pressure screens with slotted baskets arranged in a three-stage cascading arrangement. Accepts from the floatation cell are fed via a constant level feed box to the feed of the primary fine screen with a 0.20 mm slotted basket. The rejected material from the primary fine screen is fed to the primary fine screen reject stand pipe. The accepted material is fed to the disc filter for washing and thickening.

ii. Rejects from the primary fine screen reject stand pipe are diluted and fed to the secondary fine screen equipped with a 0.20 mm slotted basket. Accepts from the second stage are cascaded back to the primary stage constant level feed box. Rejects are fed to the secondary fine screen reject stand pipe.

iii. Rejects from the secondary fine screen reject stand pipe are diluted and fed to the tertiary fine screen equipped with a 0.20 mm slotted basket. Rejects from the tertiary stage are led to the screen/ cleaner reject chest. Accepts are cascaded back to the primary fine screen reject stand pipe.

iv. The slotted fine screens remove smaller size contaminants, primarily lightweight contaminants such as stickies, hot melts, plastic etc.

6.1.11 Washing and Thickening

The accepted stock from the screens is washed and thickened in a disc filter. The stock is thickened to around 8% consistency and discharged via a repulper to the screw feed conveyor feeding the screw press. The screw press thickens the stock to a consistency of around 30 to 35% and feeds to the screw feed conveyor feeding the kneader/ disperser. The filtrate from the disc filter flows to the white water chest through two drop legs, one for cloudy and another for clear filtrate. Cloudy filtrate is produced during the time when fibre mat is forming on the surface of the disc sector. Once the mat is thick enough, it functions like a fine filter collecting fines and thus producing a clear filtrate. The filtrate chest is partitioned into cloudy and clear compartments. The screw press filtrate is also collected in the cloudy compartment. The cloudy filtrate is sent for clarification in a Direct Air Flotation (DAF) clarifier. The clear filtrate is used for the disk filter cleaning showers and sheet knock off showers. Excess clear filtrate is fed to the backwater chest, which also receives the clarified water from the DAF clarifier. The disk filter washing and thickening stage is effective in removing ink particles ranging from 0.1 to 10 microns.

6.1.12 Dispersion System

The thickened stock from the screw press is fed to the kneader/ disperser via a screw feed conveyor with steam injection. The kneader/ disperser has two counter-rotating discs. The resulting rubbing action caused by the speed of the rotors separates the ink into fine particles with minimum injury to the fibre. Intense fibre to fibre rubbing action increases the temperature of the pulp by about 20°C and no additional steam is required for softening the ink and stickies. Dispersion size of most left out ink particles to the 20–100 micron range.

6.1.13 Bleaching System/ Storage

Stock from the kneading/ dispersion system is discharged to a screw feed conveyor which feeds the down flow high consistency peroxide

bleaching tower. Bleaching chemicals are added to the stock at the inlet of the kneader, which also acts as a mixer for uniform mixing of the bleaching chemicals with the pulp.

6.1.14 Water System

The deinking plant will have two water loops. Dilution requirements downstream of the flotation-2 are met from the poly disc filter filtrate and excess paper machine clarified water. Dilution requirements at the pulper, coarse cleaning and screening, fine screening, flotation and fine cleaning are met from the filtrate of loop one thickener (disc filter).

6.1.15 Clarified White Water from Paper Machine

i. Disc saveall is fed to a DAF clarifier. Polyelectrolyte flocculating agents are used for effective clarification of the white water. The clarified white water from the DAF clarifier is collected in a back water chest and used for dilution. Sludge from the DAF clarifier is collected in the sludge chest.

ii. A constant volume of clarified water from the back water chest is purged to the drain to have a control on the ionic trash build-up in the system. Fresh water is added for make-up in the back water chest.

6.1.16 Rejects Handling

i. Sludge from the flotation cell and DAF clarifier is collected in a sludge chest and then pumped to a sludge dewatering and thickening system. The filtrate from the system is sewered and to join the main effluent. The dewatered sludge is burnt in the boiler.

ii. Coarse screening and cleaning rejects, fine screening rejects and fine cleaning rejects are collected in a rejects tank and then fed to a rejects compactor. The filtrate from the rejects compactor is sewered. The dewatered and compacted rejects are burnt in the boiler.

6.2 Stock Preparation

6.2.1 Stock Preparation and Chemical Additive Preparation

i. The stock preparation plant is an area in the mill between the wastepaper processing plant and the paper machine.

ii. The proposed newsprint machine will have a separate continuous stock preparation system to prepare the stock suitable for making the newsprint paper. The stock will be received in the receiving chest at about 3.5% consistency. From the receiving chest, the stock is pumped to the blend chest. The chemical additives like alum, dyes etc will be dosed in the blend chest. From the blend chest, the stock is pumped to machine chest. The stock from the machine chest is pumped to fan pump with basis weight control system.

iii. The white water and fibre recovery system basically consists of a poly disc saveall. All the excess, rich water after internal use is pumped to polydisc saveall.

iv. For better mat build-up, a portion of incoming pulp is used as sweetener. The recovered fibre is blended along with the pulp in the blend chest.

v. The filtrate which is extracted in three split is used back in showers, dilution etc.

vi. The broke handling system is provided to process the wet broke formed at couch pit, press pit and also the dry broke generated under the machine pulper and finishing house pulper.

vii. The wet broke generated at couch pit and press pit is pumped to a thickener and the thickened pulp is stored in the broke chest. All the dry broke and the thickened wet broke is stored in a broke tower. The broke pulp is then passed through a HD cleaner,

deflaker and then blend with the incoming pulp.

6.3 Paperboard Machine Configuration, Manufacturing Process and Input Costs

6.3.1 Machine Configuration

A typical multilayer board machine has the following Sections:

i. Hydraulic head box with dilution control for the top and filler layers.
ii. Fourdrinier, forming Sections with a top wire for the filler layer.
iii. Shoe Press Section.
iv. Dryer Section with a combination of unirun and two tier configuration with hood and ventilation system.
v. An inclined size press.
vi. A hard nip precalendar.
vii. On line coating Section.
viii. IR/ Air dryers with steam dryers for curl correction.
ix. A soft nip calender.
x. Pope Reel.
xi. Rewinder & reel handling system.
xii. Sheet Cutter.
xiii. Ream and Bundling Packing.
xiv. Storage Rack system.

6.3.2 Process Description and Machinery Details

6.3.2.1 Fibre Preparation

For recycled grade, the layer wise raw materials used are as below:

i. Top Layer
ii. Top Under Layer
iii. Middle layer
iv. Bottom Layer
v. Virgin pulp/ DIP Pulp
vi. Note books/ records/ DIP Pulp
vii. Mixed waste
viii. Mixed waste/ DIP Pulp

Considering the raw material usage, processing sequence, the following raw material processing streets are considered.

Street 1: for virgin pulp/ DIP Pulp

Street 2: for Note books/ records/ DIP Pulp

Street 3: for Mixed waste

6.3.2.2 Street 1: Virgin Pulp/ White Shaving Street

This Street mainly used for producing bleached pulp from white shavings and DIP pulp and also used for slushing virgin pulp. The street contains pulper with feeding conveyor, LC cleaner and deflaker/ refiner.

6.3.2.3 Street 2: Note books/ Records

This street is for processing note books, office records and ONP. The street contains pulper with feeding conveyor. LC cleaner, two stage screening.

6.3.2.4 Street 3: Mixed Waste

i. This street is for processing Mixed Waste. The street contains pulper with feeding arrangement, LC cleaner, coarse screens, cleaners and screens for fine screening.
ii. A belt thickener and disperser for further processing for use in the bottom layer for grey back is included.
iii. Different grades of pulps are stored in separate HD tower for onward pumping to approach flow system.
iv. However, the furnish mix and the raw material will be adjusted with reference to the quality of end product.
v. For virgin grade all the layers will be of virgin pulp.

6.4 Board Machine

6.4.1 Stock Preparation cum Approach Flow System

i. The stock preparation plant is an area in the mill between the wastepaper processing plant and the paper machine.

ii. From the storage chest, in the fibre preparation plant, the stock is pumped to the blend chest at about 3.5% consistency. The chemical additives like alum, dyes etc will be dosed in the blend chest.

iii. The pulp received at 3.5% consistency is diluted with machine back water to a consistency of 0.6 to 0.8% depending on the substance required. For this purpose, the incoming pulp at 3.5% consistency is taken to the constant level box from where, through a basis weight control valve, it enters the suction of fan pump.

iv. The approach flow system is simple single dilution type consisting a low pulse primary fan pump followed by two stage pressure screening.

v. From the fan pump, the pulp at 0.6 to 0.8% consistency passes through pressure screen to remove any residual sand particles and speck and to open the bundles of fibres.

6.5 Fibre Recovery System

i. The white water and fibre recovery system basically consists of a poly disc saveall. All the excess, rich water after internal use is pumped to polydisc saveall. There will be two disc saveall to process white water. One for top layer and bottom layer in case of bleached pulp furnish and the other for top under and middle layer.

ii. For better mat build-up, a portion of incoming pulp is used as sweetener. The recovered fibre is blended along with the pulp in the blend chest.

iii. The filtrate which is extracted in three split is used back in showers, dilution etc.

6.6 Broke Handling System

i. The broke handling system is provided to process the wet broke formed at couch pit, press pit and also the dry broke generated under the machine pulper and coater Section.

ii. The wet broke generated at couch pit and press pit is pumped to a thickener and the thickened pulp is stored in the broke chest. All the dry broke is processed separately and the thickened broke is stored in a broke tower. The broke pulp is then passed through a HD cleaner, deflaker and then blend with the incoming pulp.

6.7 Chemical Additive Preparation (CAP)/ Coating Colour Kitchen (CCK)

i. CAP Section shall consist of preparation, storage and dosing system comprising dissolvers, dispersers, cookers, and volumetric dosing pumps for chemicals such as retention aid, coagulants, cationic and anionic starch, slimicide and defoamer.

ii. CCK Section shall consist of dispersers for calcium carbonate, coating clay, dissolvers for coating chemicals such as water retaining agents, plasticizers, synthetic binders, dispersers used in the surface sizing and coating application.

iii. The pulp now enters the head box of the forming Section of the board machine.

iv. Each layer is having a dedicated approach flow system.

6.8 Board Machine

Table 6

No. of Layers	Three(3)/ Four (4) Layers
Head box	Pressurised/ air cushion head box for top under and bottom layer. Hydraulic head box with slice adjuster and CD basis weight dilution control for top and filler layers.
Forming Section	Fourdrinier with necessary dewatering system, cantilever type forming Section for each layer with top dewatering wire for filler layer.
Press Section	Independent three nip press Section followed by a smooth press. The first nip is with plain roll and suction roll and second nip is between blind drilled rolls and the third nip is a shoe press
Dryer Section	First group dryer Section is arranged in single tier and conventional two (2) tier arrangement for the rest of the groups.
Size press	An inclined pond size press to apply 1–2 gsm/ side of starch
Pre-calender Section	Single nip hard calender
Coating station	Two coaters for top layer, one coater for back layer
Dryers	IR/ air dryers
Curl correction	Steam dryers
Final Calender	Single nip soft calender
Pope reel Section	Horizontal centre wind assist pope reel with primary & secondary arm.

The board machine auxiliaries include the following:

Table 7

Pulpers	Couch/ Press Pit Pulpers, UTM Pulper
Mechanical drive components	Necessary mechanical drive components for the machine drive system *viz.* cardon shafts, gearboxes, couplings, guards etc.
PM vacuum system	PM vacuum system comprises water ring vacuum pumps, blowers to meet the vacuum requirement of fourdrinier and press Section vacuum pump seal water recovery system etc.
Steam and condensate system	Cascade type steam and condensate system, comprising separators, condensate pumps, vacuum pump, surface condenser with complete instrumentation and control system.
Hood and PV system	A complete closed type hood and pocket ventilation system basement enclosures with hood fans, PV system supply air fans, ducts etc.
Tail threading system	Tail threading system from press to reel covering for the complete board machine and coater Section.
Lubrication system	Central closed circulation type oil system for dryer Section of the board machine complete and coater Section with oil tanks, pumps, pressure filters, oil heaters, oil flow meters, flow switches, control panels etc. with complete instrumentation.
Instrumentation & Controls	Necessary instrumentation and control system for the safe and trouble free operation of machine and its auxiliaries. A distributed control system (DCS) is provided.
	The machine is also provided with quality control system to control CD, MD basis weight, CD caliper and moisture.
Control panels, hydraulic system	Necessary control desks/ panels for operating various Sections of the paper machine and hydraulic system for press and calender.

6.9 Head Box & Forming Section

i. The formation of paper depends to a large extent on the design and operation of the head box. The head box, as the name implies, is at the head of the paper machine and is actually the heart of the machine. The pressure is maintained in the head box to control the flow through the slice. The pulp slurry passes through the slice on to the forming board of the forming Section.

ii. The forming Section consists of all the drainage elements like forming table, hydrofoils, vacuum foils and suction couch roll. The drainage elements of the forming Section operate with a synthetic endless wire, which is looped between the breast roll and the forward drive roll. In these drainage elements, the water is removed from the pulp.

iii. Each layer is having its own dedicated head box, fourdrinier type forming Section. As the substance range is high, the wire length is limited, a top wire is provided to drain more water at both sides for the filler layer.

iv. All the wet web layers formed in each fourdrinier will join the bottom ply fourdrinier at different locations with matching dryness.

6.10 Press Part

i. The web formed in forming Section is transferred to the press Section by pick up roll. The web dryness leaving the forming Section will be about 18% and the wet web is then passed into press Section. The press Section will be a straight through three nip Section followed by a smoothing press.

ii. While the first press will be double felted suction press and the second press will be a plain press and the third press will be a shoe press. The dryness after the press will be about 46%.

iii. A smoothing press in the fourth nip is provided.

6.11 Dryer Section

The dryers in a board machine are used to dry the wet web using steam as the heat energy. The steam entering the dryer heats their surface. Wet sheet after the presses goes around the dryers. In the process, the heat is transferred to the paper and dries the paper. The steam inside the dryer condenses and the condensate is taken out. The steam pressure is controlled in the dryer Sections through a cascading steam and condensate system. The dryer Section consists of first dryer Section with single tier, followed by conventional double tier arrangement with suitable sheet supporting arrangement between press Section and first dryer Section. The sheet after the dryers is dry and the dryness is about 93%-94%.

6.12 Size Press

An inclined pond type size press is considered to apply starch upto 2 'grams per square metre' (GSM) on each side.

6.13 Calendaring

The sheet of board so produced after the dryers is not smooth and has uneven surfaces. To increase its smoothness, and to bring uniform profile, a single nip hard calender will be installed. The pressure in the calender is controlled by the hydraulic system.

6.14 Coater Section

i. An on-line coating Section is considered.

ii. There will be three coating stations, 2 for top layer as pre-coat and top coat and one station for back coat. A coat weight upto

a maximum of 13 GSM is anticipated. The pre-coat will be a rod coater, and the topcoat will be a blade coater. The back coat is a rod coater.

iii. Each coater station is provided with drying Section IR dryer and air dryers. However, steam dryers are also provided for the curl correction.

6.15 Soft Nip Calendar

A single nip soft calender is provided as a final calender.

6.16 Reeling

To handle the board produced after calendering, it is reeled in the form of jumbo rolls on the board machine pope reel. The jumbo reels produced are removed from the board machine on achieving a diameter of around 2800 mm. The board is now ready to be cut into reels as required by the market for sale.

6.17 Finishing Equipment

i. Rewinder.

ii. Sheeter.

iii. Reel Handling and Wrapping system.

6.17.1 The board produced in the paper machine is in the form of jumbo reels and cannot be marketed as such. It has to be cut into reels as per the requirement.

6.18 Rewinder

Table 8

Rewinder is provided with	• Reel ejector-reel lowering cradle • Rewind braking unit • Drive couplings with gear boxes • Electrical drives and control system • Control desk • Necessary hydraulic power pack etc.

6.19 Sheeter

As the finished product is marketed in sheets, sheeting and packing line is required.

The salient features of the sheeters are:

i. Backstand to hold minimum, four rolls.

ii. Cutting station.

iii. Sheet transfer and overlap conveyors.

iv. Layboy.

v. Automatic sheet conveyor.

vi. Reject gate.

vii. Electrical drive and control system.

6.20 Reel Handling & Wrapping Systems

Mechanisation is considered for transportation and storage of finished goods in the warehouse and further loading on to the trucks.

6.21 Reel Handling System

In general, the reel handling system will be required to collect reels from the machine winder, and convey reels to a lowerator that will lower them from paper machine operating floor to 0.0 m ground floor, and deliver reels to sheeter Section or wrapping machine as required. From the reel wrapping machine, the packed reels shall be delivered to the warehouse by a suitable conveyor and upender arrangement.

6.21.1 The following main equipment are proposed in the reel handling system:

i. Reel stopper in front of the winder.

ii. Reel sorting deck.

iii. Bar code and roll identification station.

iv. Reversible transporting conveyor to accept reel sets from winder.

v. Transporting conveyor to lowerator.

vi. Lowerator with reversing conveyor and necessary guards and safety devices.

vii. Transporting conveyor from lowerator to reel wrapping unit or sheeter.

viii. Transporting conveyor from reel wrapping unit to reel upender.

ix. Reel upender.

x. Upended reel receiving conveyor.

xi. Storage conveyor.

6.22 Reel Wrapping System

6.22.1 The following are main equipment in reel wrapping system:

i. Reel width and diameter measuring and centering station.

ii. Wrapping station with wrapper dispenser.

iii. Crimping station.

iv. Automatic head sealing station or header press suitable for both wrapper and laminated head caps.

v. Weighing station.

vi. Reel conveyors.

vii. Automatic end cap inserter.

viii. Ink jet markers.

ix. Reel wrapper back stand.

x. Mono rail crane for wrapper back stand.

xi. Wrapping paper head cutter.

xii. Reel stoppers.

7. INPUT COSTS

The input cost cannot be standardised considering the fact that there is wide variance in process, equipment, raw material used, locational parameters and overall management of resources. However information gathered from a particular mid-sized production house is as follows:

a. **Waste Paper and Pulp:** For manufacturing of recycled grade board, the raw material is BHKP pulp/ DIP pulp for top layer and waste paper (old newspaper, Box Board Cuttings, old corrugated cartoons) for filler and bottom layer. For virgin grade board 100% raw materials is virgin pulp.

b. **Chemicals:** Chemicals used for deinking of the waste paper in the Deinking Plant and paper making chemicals used in the paper machine. In case of coated board coating chemicals are used. The standard chemicals used are given below:

   i. Deinking Plant – Hydrogen Paroxide, Caustic Lye, Sodium Silicate, Sod. Hyd. Sulphite

   ii. Paper Machine – PAC, Polymin SK etc

   iii. Coating – WGCC, Binders

   The cost of chemicals based on the present market price comes to Rs. 4,000/- per ton to Rs. 5,000/- per ton of board.

c. **Power & Fuel:** For manufacture of paper the basic requirement of availability of process steam and electricity. The process steam requirement is around 1.80 tons per ton of paper and power requirement is around 500–600 units per ton of paper with captive generation.

   The captive power plant normally requires 800 kgs of coal for manufacturing of requisite power and steam for manufacture of 1 ton of paperboard. The 800 kgs of coal is based on 3500 to 4000 GCV coal with 15% moisture and 45% ash. However, the coal quantity may increase or decrease

depending on coal quality and power plant efficiency.

d. **Packing Materials:** Maximum paperboard is sold in sheet form and packed with shrink flim. Normally shrink flim and other items of packing material cost around Rs. 900/- to Rs. 1,000/- per ton of paperboard.

e. **Quality of Paperboard:** For manufacturing of paperboard, quality is basic requirement for better printability and for smooth printing at press. Critical to quality parameters are brightness, bulk, stiffness, strength properties, moisture content, etc. for better printability of board. Paperboard is manufactured mainly in the range of 170–450 gsm.

8. TAX INVESTIGATIONS

8.1 General: Little information is available in the departmental and extra-departmental juridical reference systems about the outcome of any investigation based assessment in respect of paper industry except for a few judgments available in the public domain on income based incentives under Section 80I/80IB etc. and interpretation of the term 'manufacture' in respect of several kinds of industries producing paper based outputs. However, in general, study of the method of accounting, valuation of stock, examination of depreciation, claim for wages, sundry debtors/ creditors, loan transactions and allowability of different claims of expenditure are as much important in case of paper industry as applicable for other industries. Sometimes assesses may claim certain expenditures as revenue expenditure, which on factual and legal scrutiny, may turn out to be capital in nature.

8.2 Industry-Specific Analysis: This particular angle Centres around analysis of raw materials, chemicals, production account, purchase and cost record, sales etc.

8.2.1 Application of Ratios: There is not much updated documented data on profitability and other financial indicators in the public domain. A few studies made by the Indian Paper Manufacturers Association though available, are quite outdated. Still, Assessing Officers may go through the Annual Reports of the leading manufacturers and a gather a rough idea of various parameters like gross profit ratio, net profit ratio, Return on Capital Employed etc. Assessing Officers may also use time series data for the entity they are investigating wherefrom any abnormality in any of the indicators may be identified for further probe.

8.2.2 Input Costs: Reference may be made to paragraph 7 above. The Assessing Officers may use the information given there to get an idea about any abnormality in the figures which may require further investigation.

8.2.3 Raw Materials: In wood based industry, bamboo/ wood transported by trucks or railways are recorded at the Bamboo Yard. Similarly, the issues/ consumptions are also recorded at the bamboo yard. After receipt of the material is certified, payments are made through the accounts/ finance department. The suppliers accounts are maintained in the raw materials supplies ledger of the main bamboo and wood purchase account.

8.2.4 Forest Accounts: Historically, many paper mills in India used to take lease of bamboo forest blocks from the forest department of the State Governments or State Trading Corporations. These blocks used to be operated through departmentally or though contractors. Most of the transport is done through the railways where there is little scope for manipulation in railway

freight. The bamboo/ block to the forest blocks to the railway heads and therefrom to bamboo/ wood yards may be brought through trucks. If the operation is done through contractors, the compliance to TDS provisions has to be looked into. As usual, compliance to the TDS provisions does not necessarily mean genuineness of the transactions where the assessees take resort to inflation of expenses. Even without the involvement of contractors, there is possibility of inflation of expenditure on these points. The adherence to the provisions of Section 40A(3) in respect of unorganised transporters also may be looked into. An important point of investigation is in the quantity of timber/ wood collected from the forest. While giving the lease, the areas to be extracted are clearly demarcated by the forest department and they make an estimate of the quaintly of bamboo/ wood to be extracted. Detailed quantitative accounts are required to be maintained by the forest department regarding the quantity extracted and dispatched from the forest blocks. The particulars furnished by the assessee may be cross checked against the figures available with the forest authorities. The periodical accounts and returns of felling and removal of bamboos submitted to the D.F.Os concerned are helpful in checking the quantity and expenses incurred in cutting the bamboos, however, while comparing the two figures, certain margin is to be kept for drainage of the moisture content. When the bamboo/ wood is received in the bamboo ward of the mill, again detailed weight is taken and these measurements are kept in the bamboo yard. At each stage of production, there is an in-built system of weighing. These documents may be called for to check the quantities shown as consumed at various stages. Unless the assessee manipulates the figures at every stage, there is every likelihood that any manipulation done by the assessee in respect of quantitative consumption may be detected. Sometimes, forest areas are taken on lease from the Government/ Autonomous District Councils and the manufacturer has to pay royalty for these. The relevant agreement has to be looked into to check the exact amount of royalty so payable. In the case of purchase of agro based materials, there is a possibility of inflation of expenses on the plea of non availability of proper documents.

8.4 New Developments and Tax Implications

8.4.1 Share of bamboo as a raw material has been decreasing over the years. Due to this, a number of companies have made arrangements for afforestation of lands. It has dedicated farm lands for bamboo/ wood through the mechanism of contract farming and has increased the quantum of wood in the production process. Companies like ITC Limited, through e-choupal, have ensured purchase of bamboo/ wood directly from the primary manufactures by assuring the farmers attractive return. However, expenditure incurred by any assessee separately shown as Corporate Social Responsibility (CSR) will not be entitled to deduction in determination of its income in view of Explanation 2 to Section 37(1).

8.4.2 Recycled paper industry and units manufacturing high quality tissues may import pulp and similar raw materials. The issue of imports has been discussed separately.

8.4.3 The draft National Forest Policy provides for utilisation of degraded forest land for industry. If accepted, this policy revamp may influence the performance of this industry.

8.5 Chemicals: The purchase of chemicals can be verified from the suppliers and from supporting documents. The prices of chemicals as available in economic journals/ authentic internet sites may be compared with cost data

submitted by the assessee. Large difference may provide certain lead regarding manipulation of accounts. Mills which use and produce their own chemical and soda may sell their excess production outside.

8.6 Production Account: The manufacturing account deserves special scrutiny. Data with the GST department may be shared and examined if required.

8.7 Import of Raw Material and Plant and Machinery

8.7.1 Share of imported pulp and imported newsprint is on the rise. Paper and paperboard imports have also increased. Basis customs duty (BCD) on paper and paperboard stands at nil under India-ASEAN FTA and India–Korea CEPA. Further under the Asia Pacific Trade Agreement (APTA), India extended import tariff concessions to the world's largest paper producer China and reduced BCD to 7 per cent from 10 per cent on most grades of paper. In the last eight years, imports have grown at a compound annual rate of 14 per cent to 1.48 million tonnes last fiscal from 0.54 million tonnes in 2010–11 and in value terms, it was up 13 per cent to Rs. 9,134 crores in 2017–18 from Rs. 3,411 crores in 2010–11.

8.7.2 The increase in import figures are due to downward revision of import duties on paper pulp and newsprint and scarcity of availability of raw material back home.The major import partners are ASEAN countries. The capital intensive industry also requires installation of sophisticated Plant and Machinery which in many cases are not produced indigenously. Thus purchase of and import of machinery often involves outright purchase from foreign companies/ entities. The foreign companies do not have any Permanent Establishment in India and therefore, such purchases/ imports are free from direct taxation. The possibility of inflation of expenses through over invoicing may be carefully scanned through. In such cases, the Assessing Officer should invariably, check invoices and tally them with bills of lading/ bills of entry, as the case may be.

8.8 Depreciation

8.8.1 There are several factors worth investigating in this capital intensive industry. Apart from checking actual import and installation of plant and machinery, user of the machine during the financial year may be looked into in the particular facts of a case.

8.8.2 The paper industry units extensively use water and it is likely that they may install water treatment system. Due to strict environment norms, industries also need to install modern Air pollution control equipment, water pollution control equipment, solid waste control equipments, solid waste recycling and resource recovery system. For equipment's acquired after 01/09/2002, the rate of depreciation was 100%. However, with effect from 01/04/2017, the rate has been reduced downward to 40%. It may be also be checked whether the machinery acquired is new or used machinery from some other unit.

8.9 Goods and Services Tax (GST): GST will have a positive impact to curb underreporting and misreporting practices or inflation of expenses. Sharing of GST data on input materials may help the Assessing Officers in their investigations in addition to verification from the angle of Section 43B of the Income-tax Act, 1961. On the other hand, paper, articles of paper pulp, paper board falls under HSN code chapter 48 of GST commodity tariff schedule. The tax rate has been notified and it is seen to

vary from 5% to 12% and 18% for various types of paper products.

9. CONCLUSION

The paper industry in India is witnessing significant growth and capacity expansion to meet the growth demand for paper consumption as a result of growth in education sector and increasing literacy rate. In this scenario, there are more chances of leakage of revenue in the industry. Therefore, the Assessing Officer has to understand procedure to produce the paper and related product by the assessee and then, after collecting all relevant facts of the case on hand, he has to decide the line of investigation with help of basic understanding given in this article.

CHAPTER

12

Rice Shellers

1. INTRODUCTION

1.1 After maize, paddy is second largest crop in volume followed by wheat in the world. Maize is considered as indirect source of food as the same is mostly used in poultry/ cattle feed. Rice is the foremost grain used in direct human consumption followed by wheat. Wheat is preferred over rice in developed countries of Europe, North America, South America, Africa and Australia continents whereas rice is used as food grain in third world countries, mostly following in Asia. Rice, wheat, and maize are the world's three leading food crops; together they directly supply more than 42% of all calories consumed by the entire human population. Human consumption accounts for 78% of total production for rice, compared with 64% for wheat and 14% for maize. Of these three major crops, rice is by far the most important food crop for people in low-and lower-middle-income countries. Although rice consumption is spread across income classes, relatively equally in low-income countries, the poorest people consume relatively little wheat. Rice is the staple food of more than half of the world's population. Asia accounts for 90% of global rice consumption, and total rice demand continues to rise. But outside Asia, where rice is not a staple yet, per capita consumption of rice continues to grow. Rice is the fastest growing food staple in Africa, and also one of the fastest in Latin America. Global rice consumption remains strong, driven by both population and economic growth, especially in many Asian and African countries.

1.1.1 After China, India is the second biggest consumer of rice and rice is mainly consumed as a staple food by more than 70% of the population, but the per capita rice consumption has been declining due to growth in Indian economy which accounted for an increase in the purchasing power that led to a diversification of diet. During the FY 2017–18, comparative production of rice, wheat and maize in India is 112.91 MT, 99.70 MT and 28.72 MT respectively. Paddy is extensively grown food crop occupying 43.79 million hectares of area. Thus, rice is the main crop in India.

1.1.2 Rice is drawn from paddy after removal of husk by a milling process. Therefore, rice is part of paddy. In other words, paddy is the rice grain with husk. Generally, rice plant is also

called paddy. This is a crop which belongs to the family Gramineae. Its botanical name is *Oryza Sativa.* It is a wetland crop which extensively grows all over the world. Paddy is the main crop in the majority of the Asian countries including India, China, Pakistan, Thailand, Indonesia, Philippines. Geographically rice is distributed over a wide range of conditions embracing Central America, Southern half of USA, West Indies, South America, Africa, Australia, India, China, Japan, and South-East Asia. The paddy cultivation started with the beginning of human civilization. The wetland cultivation originated in China but field cultivation of paddy was first started in Korea.

1.2 The areas under paddy in the country can be broadly classified in the following five regions according to the rice cropping season and other agricultural conditions:

1.2.1 The North-Eastern region i.e. Assam, West Bengal, South Bihar and Orissa. Here rice is grown in the basins of the Brahmaputra, Ganga and Mahanadi rivers. The region has the highest intensity of rice cultivation in the country.

1.2.2 The Southern region i.e. delta tracts of the Godavari, Krishna, Cauveri and Tambrabarni rivers and the non-deltaic rain fed areas of Tamilnadu and Andhra Pradesh. In the deltaic tracts rice is grown under irrigated conditions.

1.2.3 The Central region of Madhya Pradesh, Telengana in Andhra Pradesh and parts of Karnataka. Except in Andhra Pradesh, rice is sown as a rain fed crop in this region. One crop of rice per year is the normal practice in this tract.

1.2.4 The Western coastal region comprising Kerala and coastal districts of Maharashtra and Karnataka. Here rice is grown largely under rain fed conditions during the period May–June to November–December.

1.2.5 The Northern Region comprising Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, and North Bihar, has low winter temperatures and only a single crop of rice is raised from May–June to September–October.

1.3 From the above para 1.2 it is seen that paddy is grown to varying extents in all the States, yet top 10 rice producing states for F.Y. 2017–18, are as under:

Table 1

S. No.	State	Production of Rice (in MMT)	Area Under Paddy (Million Hectares)	Average Yield (kg per Hectare)
1	West Bengal	14.97	5.12	2926
2	Punjab	13.38	3.07	4366
3	Uttar Pradesh	13.27	5.81	2283
4	Andhra Pradesh	8.18	2.16	3792
5	Bihar	7.91	3.28	2409
6	Tamilnadu	7.28	1.86	3923
7	Odisha	6.53	3.70	1765
8	Telangana	6.25	1.97	3176
9	Assam	5.16	2.45	2107
10	Chattisgarh	4.73	3.76	1256
11	Haryana	4.52	1.42	3181
12	Madhya Pradesh	4.12	2.04	2026

Source: Agriculture statistics at a glance 2018 Directorate of Economics and Statistics

1.4 Some special characteristics of paddy production in India:

i. After China, India is the second largest producer of paddy.

ii. India is the largest exporter of rice with a total volume of USD 7.4 billion involving 12.5 million metric tons as of 2018/2019. Thailand was the second largest rice exporter, with about 10.3 million metric tons of rice worldwide in that year.

iii. Since 1950, though area under paddy cultivation is slightly shrinking yet paddy production in India is rising due to increase in per hectare yield of paddy.

iv. Though Punjab is not a home to paddy yet per hectare production is highest amongst Indian states.

v. Similarly, in Punjab rice is not preferred as staple diet yet due to high volume of production it has become largest supplier of rice to other Indian states.

vi. Basmati Rice known for its aromatic qualities is produced in Punjab and Haryana.

vii. Though Bihar was having largest area under paddy but after carving of Jharkhand out of Bihar now West Bengal has taken first place.

viii. Andhra Pradesh used to be stated Rice Bowl of India but in recent years it had drifted to a lower berth. After separation of Telangana, it has now actually drifted far lower to sixth position.

1.5 Characteristics of Paddy Crop

1.5.1 The growth of paddy crop depends upon internal or genetic factors, and the environmental conditions. The genetic characters, such as dwarfness, disease resistance, flavour, fine grain characteristics, cooking qualities, etc. are related to the genetic make-up of the plants. The genetic constitution of a given plant or a crop variety sets definite limits to the type of development of which the plant/ crop variety is capable.

1.5.2 Environmental factors can be defined as the "aggregate of all the external conditions and influences affecting the growth and development of plants". The environmental factors affecting plant growth are-climate, soil, water supply, and supply of plant nutrients.

1.5.3 Paddy as a crop shows very wide adaptability to different soil and climatic conditions and can, therefore, be cultivated over a vast area in the tropical and subtropical regions. Yet, it has its own soil and climatic requirements under which it performs best. It is grown under varying conditions of rainfall, altitude and climate. In parts of eastern regions and peninsular India, the mean temperatures throughout the year are favourable for paddy cultivation and two or even three crops of rice are taken in a year. In the northern and western parts of the country, where winter temperatures are fairly low and the rainfall is not high, only one crop of paddy is taken during the months of May to November.

1.5.4 There are three main seasons for growing paddy and these are named according to the seasons of harvest of the crop. The most important is the Kharif crop (winter paddy) sown in June-July and harvested in November-December. A little over 51% of India's paddy crop is grown in this season and it usually consists of medium or long duration varieties. The autumn paddy is grown in May-June and harvested in September-October. About 44% of paddy crop is grown in this season. The summer paddy is sown in November, December and harvested in March-April.

1.5.5 Paddy is adaptable to all kinds of soil. The suitability of a soil for paddy cultivation depends more on the conditions under which the plants are grown than upon the nature of the soil itself. The semi-aquatic nature of the crop necessitates a heavy soil through which the irrigation or rain water will not be easily drained away, because for

paddy the requirement of water is more crucial than soil conditions. Paddy, being a semi-aquatic crop, grows best under submerged or water logged conditions. A major part of paddy crop in India is grown under "low land" conditions, i.e. under "flooded" or "submerged" conditions. On level areas without bunds or dikes or areas that are not terraced, paddy may be grown during the rainy season without impounding the water in field. Paddy grown under such conditions is known as "up land" paddy.

1.5.6 In India the principal systems of paddy cultivation adopted are 'dry', 'semi-dry,' and 'wet'. The dry and semi-dry systems of cultivation are mainly confined to tracts which depend on rains and do not have adequate irrigation facilities. The wet system is practiced in areas with assured and adequate supply of water either by way of rainfall or through irrigation. In some areas like Assam, Bihar, UP and West Bengal, flooded conditions occur in the monsoon. Deep water paddy is cultivated in these areas.

1.5.7 The paddy crop is reaped mainly by manual labour. The harvesting is usually done when the paddy kernels in the lower part of the head have not hardened completely or the upper parts of the leaf-blades have not turned completely dry. In some regions, the crop is threshed as soon as it is cut, while in others, a certain amount of time, varying from a week to two months, is allowed to elapse after reaping. Threshing is done either by beating the sheaves against a block of wood until the paddy grains are separated from the straw, or by bullocks treading the sheaves laid on the threshing floor. When threshing is done by beating the sheaves, a little dressing may be required to remove whatever chaff as may have found its way into the produce. If the paddy has been trodden by bullocks, the grain is usually separated from the chaff and impurities by winnowing. With technological advancements, the mechanization in paddy growing is increasing day by day. Earlier, transplantation, cutting and threshing were done manually whereas, these days use of power-driven trans-planters, reapers and combine harvesters has been increasing day by day.

1.6 Difference between Paddy and Rice

Paddy is the rice grain with husk. The term paddy was derived from Malay word with the meaning of rice in the straw or husk. Therefore, rice plant is also called paddy. On the other hand, rice is the seed of paddy. The process of removal of rice from paddy is generally called Rice Shelling or Rice Milling.

The processes of sowing, transplantation, harvesting, marketing of paddy by the farmer are agricultural processes and purchase of paddy for processing thereafter, shelling of rice from paddy, extraction of oil from rice bran are commercial processes from Income-tax point of view. Therefore, in the forthcoming paras we will discuss these processes i.e.

i. Purchase of paddy from farmer.

ii. Shelling of rice from paddy.

iii. Extraction of oil from rice bran.

It is worth noting here that major difference between wheat and paddy grain is that wheat husk is removed in the process of threshing in the field itself whereas in case of paddy grain is harvested from the fields and removal of husk from the grain is done in rice mills/ shellers. The shelling of rice is the tedious process since paddy husk is tightly wrapped around the rice grain and it is harder than the husk of wheat grain. It is the sole reason that rice shelling has become a voluminous commercial activity involving much more cost than the flour mills.

2. MARKETING OF PADDY

2.1 Introduction

2.1.1 The marketable surplus of paddy is assembled, by a host of agencies, *viz.* the farmers, the landlords, village merchants,

commission agents, wholesale merchants, agents of millers, and cooperative organisations. In states such as Haryana and Punjab the food agencies owned by Union or State Governments such as Food Corporation of India, PUNSUP, Markfed, Hafed etc. do play a major role in procurement of paddy in paddy surplus states such as Punjab and Haryana. However, in other parts marketing is not regulated. Though, the paddy is purchased at cheapest rates much below the minimum support price being fixed by the Union Government every year on the basis of recommendations of Commission for Agricultural Costs and Prices (CACP) directly from the fields by Dalals/ Mill owners but for the purpose of books of accounts purchase prices are jacked up through a series of bogus bill trails.

2.1.2 Well-organized assembling markets or mandis are now coming up in India. A considerable part of the marketable surplus of paddy is normally acquired directly from the field by the rice-millers or their agents, by traders of various categories and professional de-huskers. Thus, a large portion of the paddy produced never enters the market. Wholesale merchants and commission agents figure largely in the assembling of paddy and rice by collecting produce from the cultivators, village merchants and itinerant merchants.

2.1.3 The mill agents play a fairly active part in the assembling of paddy by paying periodical visits to villages, haats, etc. in order to buy their requirements direct from the farmers, village merchants or itinerant dealers. Advances or money may be made to producers even before the crop has matured, thus binding them to bring their harvest to the mill.

2.1.4 The three types of markets that are in vogue for buying and selling paddy are the primary markets known as haats at the village level; the secondary markets known as mandis or gunj in urban and township areas; and terminal markets in towns and cities where the produce is finally pooled for consumption and distribution in the intra-or inter-State trade or for export abroad.

2.2 Market Functionaries

2.2.1 Arhatiyas or arhatdars (commission agents), dalals (brokers), tolas (weigh men) and palledars or hamals (labourers) are the four important market functionaries.

2.2.2 There are two kinds of Arhatiyas, namely, kutcha and pukka. The former is a person of small means acting mainly as an intermediary between the primary producer and the buyer in the wholesale assembling market, and receiving commission for his services from the seller or the buyer, or sometimes from both. The pukka Arhatiyas who often function as wholesale merchants also buy produce in the assembling markets or sell produce at consuming centres on behalf of their clients in other centres. The functions of a kutcha or a pukka arhatiya may both be carried out by the same person, who is then known as kutcha-pukka Arhatiya.

2.2.3 Tola may be employees of the arhatiya working on salary or commission basis, or may work independently for a fee known as tolai, charged on the quantity of the produce weighed. In regulated markets, as also usually in markets managed by the market committees, tolas are licensed, and the scale of charges fixed.

2.2.4 Palledars or hamals are labourers, who carry on operations like loading and unloading in the carts, wagons, lorries, etc. stacking bags, assisting in weighing, cleaning and dressing the produce.

2.3 Market Practices

2.3.1 Paddy is usually brought to the assembling markets in bulk, and rice packed in gunny bags.

The Arhatiyas negotiate sales on behalf of the seller. The transactions generally take place in morning, the latter part of the day being taken up in weighing and settling accounts. Prices may be settled by giving offers-under cover or by auction or by open offer or a private treaty. In the 'cover' system, the buyer indicates the prices he is prepared to pay by clasping the hands of the arhatiya under cover of a cloth and pressing or manipulating the fingers. The seller is usually consulted by the arhatiya before he accepts the offer. In the auction system, the arhatiya auctions the produce at a particular part of the day, when all the buyers assemble near the produce. For sales by open offer or private treaty, the buyers may give their offers by going to the sellers' agent at any time or to the dalal when he comes around with his samples.

2.4 Market Charges

2.4.1 When paddy or rice is brought to the markets for sale, a number of deductions, either in kind from the produce or in cash from the sale proceeds are made. In some cases, the buyers have also to bear some charges in addition to the price of the produce.

2.4.2 The first charge is the toll or tax. In private-owned markets, the owner or the lessee generally levies a toll on all produce handled in the market. The municipalities, in many cases also levy an octroi or terminal tax on the agricultural produce entering municipal limits. The next charge is the commission or arhat or dalali paid to the arhatiya and dalal, respectively, in return for their services. They are payable by the seller or the buyer, or sometimes by both.

2.4.3 Besides the arhat and dalali payment in cash or in kind has to be made to the labour employed for loading, unloading, cleaning, weighing or measuring the produce and stitching of bags, etc. These charges, which vary in different markets depending on the local rates of labour and the extent of services rendered, are generally borne by the seller, but the cost of removing the produce after weighment to his godown is, in most cased, met by the buyer.

2.4.4 Apart from the payments to market functionaries, deductions in kind are also made from the seller in order to compensate the buyer for loss in weight on account of impurities, driage, etc. Dhalta (quantity allowance), karda (deduction on account of refraction) and dan are some of the deductions of this nature.

2.5 Price of Paddy

2.5.1 The prices of different qualities of paddy are determined by the size of grain, milling quality, and its physical characteristics e.g. impurity contents, proportion of damaged or defective grains, rd grains, admixture of other varieties and moisture contents. Paddy from which fine rice can be manufactured is normally dearer, while that from which bold rice is produced is the cheapest.

2.5.2 The milling quality is generally judged by the rough and ready test of rubbing a few grains of paddy between the palms, or between two small wooden boards to remove the husk and disclose the rice kernel. The sample which husks readily without an unduly large breakage of kernels is considered to be of good milling quality, while the one having a thick husk, or is hard to husk, or showing a tendency for the kernels to disintegrate, is considered of poor milling quality. Paddy of poor-quality sells at a discount which varies with the fine, medium and bold types.

2.5.3 The value of paddy also takes into account the presence of foreign matter, undeveloped grains, admixture of other varieties, and moisture content. In many areas, customary allowance is conceded by the seller to the buyer in the shape of extra weight to compensate the latter for the presence of foreign matter, impurities, etc. as well as moisture in the grain.

2.6 Procurement of Paddy by Government Agencies

As stated above as far as production of food grains specially wheat and paddy are concerned their production is not uniformed. There are some surplus states which may be called supplier states and on the other hand deficient states which may be called consumer states. The Union Government has been regulating minimum support prices of major food grains on the basis of recommendations of Commission for Agricultural Costs and Prices (CACP). Many state governments have enacted Agricultural Produce Marketing Acts, by which the sale of paddy is regulated through Mandi/ Market Committees. In these of the surplus states government agencies have been assigned the task of procurement of wheat and paddy on minimum support price and supply the same to deficient states through Public Distribution System commonly known as PDS. In case of paddy these agencies procure paddy from mandis and store the same with private rice mills for the purpose of shelling. After shelling the rice is supplied to the deficient on their requirement basis. Therefore, in the surplus states such as Punjab and Haryana marketing of wheat and paddy stands regulated and the farmers are assured of minimum support price subject to threshold quality parameters such as commodity, colour and length of the grain.

3. RICE MILLING

3.1 An Introduction to Rice Milling

3.1.1 The process of de-husking or sometimes known as de-hulling and separation of other ingredients such as rice bran, other impurities is known as rice shelling or rice milling. Rice milling is a seasonal industry. The de-hulling starts in the month of August/ September, and lasts up to February/ March. A lot of paddy is sold in the country in unregulated markets. The price of paddy of different qualities is determined by grain size, milling quality and physical characteristics such as impurity contents, proportion of damaged or defective grains, red grains, admixture of other varieties and moisture contents.

3.1.2 The methods used for converting paddy into rice may be broadly classified into-hand processing, and machine drilling. Hand processing, is extensively in vogue in rural areas. It employs the pestle and mortar method to remove the husk from paddy. Machine milling employs power driven machines to de-hull paddy.

3.1.3 The modern rice mill is a semi-automated/ automated factory consisting of mechanical handling and conveying equipment, oil fired dryers, bulk silo storage, mechanized parboiling equipment, by-product separators, and polishers. Here, paddy is first discharged by means of an elevator on to a set of cleaning sieves where it gets freed of stone, straw, dust, grit etc. It is then husked in the Sheller and the shelled paddy is freed of husk in a husk separator. The paddy from the mixture of rice and paddy (remaining unhusked) is removed in paddy separators and the shelled rice is carried by elevators into a storage chamber from which the rice can be fed to a series of polishing cones for the polishing of the rice. The polished rice is delivered by an elevator to a sorting sieve where the head rice and broken grains are separated and latter collected separately. The process in modern rice mill is depicted in the following diagram.

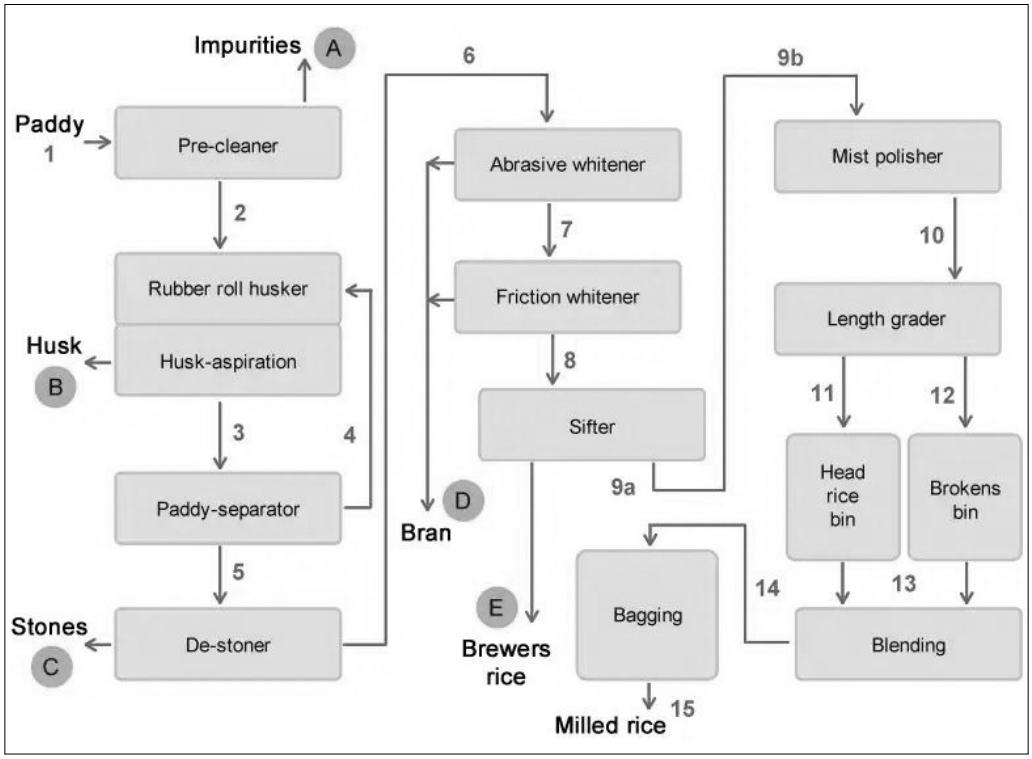


Fig. 1

3.1.4 Brown *vs.* White Rice

Rice grain consists almost entirely of carbohydrates and with small amounts of proteins and practically no fat. Whereas, the wheat grain contains large amount of proteins other minor and micro nutrients such as glutton with lesser amount of carbohydrates as compared to rice. This is the main reason that wheat is preferred over rice. Brown rice is obtained by way of simple process of de-husking. No polishing is made to remove bran from the grain whereas in case of white rice, rice grain is polished by a series of rubber polishers to remove bran from the grain. Therefore, brown rice contains more fibers, anti-oxidants, vitamins and minerals. On the other hand, white rice is mostly a source of empty calories with lot of carbohydrates but very few nutrients. Health conscious people prefer brown rice. On the other hand, white rice is preferred where presentation does matter such as in hospitality industry. Following table depicts presence of vitamins and minerals in brown *vs.* white rice.

Table 2

	Brown (RDI)	**White (RDI)**
Thiamine	6%	1%
Niacin	8%	2%
Vitamin B6	7%	5%
Manganese	45%	24%
Magnesium	11%	3%
Phosphorus	8%	4%
Iron	2%	1%
Zinc	4%	3%

Source: www.healthline.com

3.1.5 Black Rice: The texture of black rice is a bit heavier as compared to other varieties of rice but its natural flavour is rich and sweet. Black in colour when harvested, once cooked it turns deep purple. It is harvested only in India and China. In India, it is mainly grown and consumed in Manipur where it is known as "Chackhao". It has cultural and traditional significance to the people of Manipur and other parts of Northeast India where no celebration

is complete without a delicious serving of black rice. It contains high amount of antioxidants namely Anthocyanins, dietary fiber, minerals and other anti-inflammatory nutrients. Anthocyanins is known as cancer fighting, beneficial for heart health and inflammatory conditions. Due to its health benefits, black rice has a good market potential, especially in the overseas markets, as the demand for the same is growing in the USA, Australia and Europe.

3.1.6 Rice may be of two types *viz.* raw and parboiled. The former is not subjected to any form of treatment prior to milling, while in the case of the latter, the usual practice is to first keep the paddy in water and subsequently supply heat by steam or other means. Parboiling toughens the rice kernel and enables it to withstand milling better without excessive breakage. A large proportion of rice consumed in country is parboiled.

3.1.7 In the rice processing following bye products are produced:

a. **Rice Husk:** Rice husk or rice hull is the coating on a seed or grain of rice. It is generated during the first stage of paddy milling. Till recent past it used to be considered a total waste having no commercial value however in recent past it has been being used in energy production. Common uses of rice husk are depicted in the following chart:

b. **Rice Bran:** Rice bran is a mixture of substances including protein, fat, ash and crude fiber. It is generated when brown rice moves through the whiteners and polishers. In modern rice mills several different kinds of bran are produced that are Coarse Bran, Fine Bran, Polish. The rice bran is used for extraction of oil, poultry feed and cattle feed.

c. **Rice Germ:** Often known as Nakku.

d. **Brewer's Rice:** Brewer's rice is separated when milled rice is shifted. In north part of India it is commonly known as 'totta' i.e. broken rice. It is often used as ingredient for beer brewing hence the name. It has a variety of other uses including ingredient for rice flour and rice noodles.

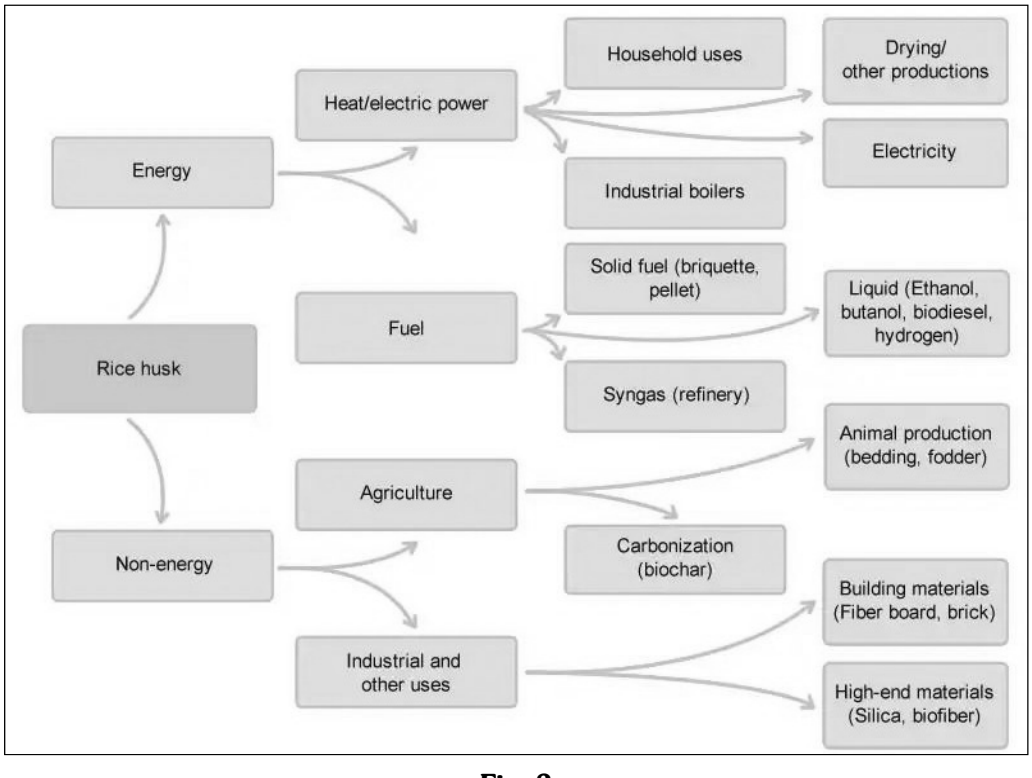


Fig. 2

The following table depicts approximate yield of rice and its bye products:

Table 3

Rice & Brewer's Rice	Rice Husk	Rice Bran	Rice Germ
70%	20%	8%	2%

3.2 Books of Accounts

3.2.1 Rice milling is a fairly complex operation, and success of the venture depend on the setting up of various control points. Even in the best of circumstances, personal supervision and control of its multifarious aspects is difficult to achieve. The regulatory intervention of Government in the rice trade has made it obligatory for the rice millers to maintain certain registers and submit certain statements at prescribed intervals.

Gate Pass Book: This book contains a record of all goods coming into the factory and going out of the factory.

Paddy Gate Book: This is a record of the stock of paddy delivered in the mill premises. The quantity of the stock of paddy delivered, the weight of each bag, name and address of the vendor, etc. are recorded in this book.

Weighing Register: After paddy is received and entries made in the Paddy gate book, the bags weighed and the actual weights of paddy are entered in this register.

Purchase Voucher Register: After the paddy is weighed a bill is made out and recorded in this register.

Railway Pass Register: Particulars of rice consigned by rail are entered in this register.

Muster Register: In this register, particulars of coolies employed in the factory and payments made to them daily are entered.

Other Registers: In some states, sales tax authorities prescribe maintenance of a register containing particulars of the opening stock of paddy, receipt of paddy, quantity of paddy sold, quantity issued for milling, yield of rice and broken rice, quantity of rice and broken rice sold and balance of paddy and rice in stock.

3.3 Tax Investigations

3.3.1 Organisational Structure: The profile of the Indian rice milling industry reveals that partnership firms dominate the business; the corporatization is gaining momentum. The mills generally fall under following types *viz.*

a. Those that own the rice mills and carry on the business of rice milling on their own.

b. Those that own the rice mills and do the rice milling on contract basis for Government Agencies or other private entities.

c. Those that own the rice mills and lease them out to others.

d. Those that take rice mills on lease and carry on the business of rice milling.

3.3.2 In cases where the rice mill is owned by one firm and operated by another on lease, there may or may not be common partners. The presence of common partners may well point to the necessity of ascertaining how far the ostensible dichotomy between the owners' and the contractors' firm is real. It may be conceded that a host of factors e.g. dearth of finance and managerial ability, disinclination to take risks, preference for more profitable avenues of investment, do compel the owners of a rice-mill to lease it out rather than work it themselves. Even so, it should not be forgotten that by setting up two firms-one owning rice and the other operating it on lease-one could considerably reduce the incidence of taxation. In appropriate cases therefore, investigation should be directed towards ascertaining the true state of affairs.

3.3.3 Cost of Construction of Rice Mill

In the case of a newly constructed rice mill, it is essential to investigate the cost of its construction, and the source of the investment. It is well known, that business entities make maximum use of institutional finance. The nationalized banks and

the financial institutions finance the setting up of rice-mills. Profitability of the venture is one of the criteria applied by them while processing the loan applications. Profitability is an index of a firm's financial capacity to pay back the money borrowed. However, it has been generally seen that cost of construction is suppressed where the rice mill is constructed out of own funds of the partners/ share-holders. On the other hand, cost of construction is generally declared on higher side in case the same is done with borrowed funds. Larger the borrowed funds, larger the risk of enhancement of cost of construction. The trend shows that in view of the high risks, availability of cheap borrowed funds pushes the entrepreneur to establish a mill entirely by borrowed funds under corporate structure.

The profitability of a rice mill depends on the cost of its construction, the working capital required, the capacity of the mill, the cost of raw material (paddy), the price of the finished product (rice), the liability towards taxes, interest on other borrowing and other related factors. The project report prepared by the banker as an essential study of the profitability of the project, contains a wealth of data which the AOs will find useful when investigating the cost of construction of a rice mill.

3.3.4 Examination of Trade Creditors

The Indian farmer is perennially in need of money. Therefore, the trade creditors often include such farmers to whom money has already been paid. In almost all the cases of rice mills huge trade creditors appear in the Balance Sheet. These trade creditors are generally farmers from whom paddy is shown to have been purchased during the financial year. Therefore, it is very important to examine these trade creditors by making field enquiries or through recording statements on oath. The creditors should be asked to furnish proof of their land holdings and area under paddy cultivation. The creditors should also be asked to furnish details of his house hold expenditure and his savings. Enquiries should also be made to see as to whether the creditor has taken loans for agricultural operation or otherwise. These enquiries will help determine as to whether the creditor had a reasonable paying capacity. The payments to the creditors are generally shown by the rice millers in the first few months of the subsequent year and that too by cheques. In one case, when enquiries were made from the bank, it was found that the cheques were in fact bearer cheques and had been en-cashed either by the assessee or his Munim. When these facts were confronted to the assessee, no satisfactory explanation was offered resulting in addition on account of unexplained cash credit.

3.3.5 Advance to Farmers

Very often the millers advance moneys and other inputs such as fertilizers to farmers. The advances are then adjusted against the value of the produce purchased from them. The manner in which the accounts are settled needs to be examined closely. In the case of cash advances, it must be seen whether, on the relevant dates, the miller had sufficient funds in his books. In the case of advance of inputs, it must be seen whether on the dates on which the inputs are purchased, the millers had sufficient funds in his books of account. Again, the total quantity of inputs advanced to the farmers must be verified with reference to the total quantity purchased to ensure that the miller had not financed the purchases from out of the unaccounted money in its possession. The price difference, if any, charged by the miller must be treated as profits. The stock of inputs left with the assessee should be reflected in the closing stock disclosed in the books of accounts.

3.3.6 Verification of Purchases

In the case of an agricultural produce like paddy, verification of purchases is ordinarily difficult for more reasons than one. Firstly, farmers do not maintain books of accounts. Secondly, the purchases are usually verified after lapse of several months, and consequently, what passes for verification is nothing more than a test of

the farmers' memory. Thirdly, the absence of a precise, uniform grading system compounds the situation for verifying the cost of production.

Case Study: In NWR charge, a suspicious transaction report was received with information that business entity X has been receiving payments by way of bank transfers from A and D. The amount used to be withdrawn in cash by X. During the course of investigation, it was found that both the concerns viz. A and D were proprietary concerns of father son duo engaged in the business of rice milling/ shelling. On the basis of discrete enquiries, a search and seizure operation was conducted on proprietor of X. A large number of diaries were seized from his possession and during the course of investigation in his statement proprietor confessed that he has been engaged in providing bogus bills in which he returns cash against cheque/ transfer payments.

3.3.7 Paddy is purchased by the rice millers either through registered traders or directly from the farmers. In case, the purchases are made through a registered trader, Form No. 9R in respect of the 'Mandi Shulk' paid is issued by the trader to the rice miller. On the contrary when purchases are made directly from the farmer, Form No. 6R is issued by the rice miller to the farmer. Form No. 9R bears the signature of the registered trader as well as the purchaser. Form No. 6R bears the signature of the rice miller as well as the farmer.

3.3.8 At the time of scrutiny of case, full details of the purchases of paddy on day to day basis should be obtained along with the copies of Forms 9R and 6R. These should be cross tallied. Many a time the assessee includes certain expenses in the purchase cost of the paddy on account of transportation expenses incurred for transporting the paddy from the field of the farmer to the mill premises. However, generally these expenses are un-vouched. The assessee should therefore be asked to furnish names and addresses of such transporters and to produce them for examination. If necessary, field enquiries should be made in this regard. Since rice shelling requires transportation of paddy rice, husk and other products in bulk documentary evidence in respect of transportation of goods is crucial evidence. At times GRs (goods receipts) are made in the name of fictitious registered number of vehicles which may be checked from the RTA.

3.3.9 The vouchers evidencing the purchase of paddy from farmers are invariably prepared by the millers themselves. In the best of circumstances, the farmers are interested in getting the agreed price as quickly as possible. It is not uncommon for the purchasers to obtain the signature of the farmers on blank voucher forms and to fill them in later. Here, the price of paddy may be inflated. To match the inflated price, the quality of the paddy may also be suitably manipulated. Such malpractices may be resorted to not only in respect of the paddy purchased by the assessee in its own name, but also in respect of the paddy purchased benami. Timely surveys and search operations, particularly during the peak purchase season, have in the past brought to light blank vouchers with farmers signatures. A critical examination of the internal evidence can lead to detection of inflation of purchase prices.

3.3.10 As already stated, paddy is classified into fine, medium, and coarse varieties. There is always a varietal price difference. Medium variety fetches a higher price than coarse variety, and fine variety is costlier than medium variety. If the vouchers indicate the variety of the paddy purchased, a comparison of the price paid by the miller for the variety in question, with the price paid by him for the next higher variety, and the price paid by other millers of the locality for different varieties will bring inflation of purchase price into bold relief. This must then be followed by an inquiry into the rate at which the rice obtained on conversion of the batch(es) of paddy in question was sold. Conducted on right lines, such an inquiry will bear fruit.

3.3.11 In one case it was found that the price allegedly paid by a miller was substantially higher than the prevailing rate for coarse paddy. The purchase vouchers did not indicate the variety of the paddy purchased. The contention of the miller was that he had purchased paddy of medium variety, and that the price paid by him compared well with the rates prevailing in the relevant season. *Prima facie*, the reason given appeared to be sound. However, on examination it was found that the miller had sold the rice obtained from these batches of paddy to Food Corporation of India, which had paid him the rate fixed for coarse rice. A case of inflation of purchase price was thus proved.

3.3.12 The farmers generally sell their paddy immediately after threshing. This is the reason why the millers make bulk purchases during the season. Fresh or new paddy has higher moisture content. In many parts of the country, the purchasers customarily get an allowance on this score. For example, in Andhra Pradesh, the standard weight of a bag of paddy is 75 kg. In respect of the purchases made early in the season, the purchasers get 2 kg of paddy extra to compensate them for the weight loss on account of drying. Purchases made late in the season carry an allowance of 1 kg. Besides the allowance on this count, the purchasers may also get a refraction allowance (variously called tharam etc.) to compensate them for loss on account of presence of foreign matters/ shrunken, or sprouted paddy. The miller usually claims some loss on account of drying, cleaning etc. The loss on these counts cannot be disputed. But while examining the reasonableness of the claim, it is essential to check whether extra paddy, if any, collected by the miller has been fully accounted for. If the loss claimed is allowed without taking into account the extra paddy collected by the miller, clearly a case of double allowance will arise. Hence, it will be necessary to see whether the miller had accounted for the gross weight (75 kg + 2 kg) or the net weight (75 kg). For this purpose, the gate book and the purchase register may be examined.

3.3.13 Not infrequently, the assessees purchase paddy from their partners themselves. This fact, per se, should occasion no surprise, because the big landlords of the locality are partners of the milling firms, and there is nothing outlandish about their selling their produce to the firms in which they are partners. A point or two, however, deserve notice here. Firstly, it must be ensured that the firm does not clearly and clandestinely pass on part of its taxable profits to the partners in the guise of higher price for the paddy purchased from them. It is therefore essential to verify whether the price paid to the partners compares favorably with the price paid to the farmers. In cases where higher than normal prices are fund to have been paid to the partners, the reasons therefore must be ascertained and critically examined. If, for example, it is contended that a higher price was paid because the paddy was old, the capacity of the partner to sell old paddy must be judged with reference to:

i. The extent of land possessed by him.

ii. The yield obtained therefrom.

iii. The sales made by him during the previous years.

These factors will indicate whether the partner could have had old paddy in stock. If, on the other hand, it is contended that the paddy was of superior variety, then the price for which the resultant rice was sold must be checked.

3.3.14 It is not unusual for rice millers to mill paddy belonging to others for a fee. The extent to which such milling on hire is undertaken will naturally depend on whether, after milling the assessee's own paddy, sufficient milling time/ capacity is available. In cases where significantly large quantities are shown to have been milled on hire, it will be worthwhile to investigate into the matter deeply.

3.3.15 It is not uncommon for millers to purchase paddy on credit, and hence the presence of such credit purchases per se need not cause any suspicion or surprise. Care should, however, be taken to verify at random, some credit purchases to make sure that they are really credit purchases; for it is quite easy to camouflage cash purchases financed by black money as credit purchases. The modus operandi adopted is that, in the first instant, the black money available with the assessee is used to finance purchases which are recorded in the books of accounts as credit purchases. The fictitious trade credit is cleared as and when the books of accounts show sufficient cash balance. Needless to add, the money thus, siphoned off the books will go to augment the stock of black money available with the assessee. It is, therefore, essential to contact the alleged trade creditors and ascertain the true facts of the purchases.

3.3.16 Verification of Output: Paddy when milled, yields rice, broken rice, bran, rough bran and husk. In the course of investigation, it is essential to see whether the yield, especially of rice and brokens disclosed by the assessee is reasonable. Other things being equal, the yield of raw rice with 'brokens' will be around 69.5%, and that of boiled rice with brokens around 70.5%. The yield of 'brokens' is around 5% for raw rice. In the case of boiled rice, 'brokens' are negligible. Any significant shortfall in the yield of rice, coupled with an abnormally high yield of 'brokens', should alert the AO. The reason is that it is easy for the miller to pass of rice as 'brokens'.

3.3.17 The phenomenon of abnormal yield of 'brokens' may be looked at from another angle. The normal yield of 'brokens' is about 5%. Suppose, a miller shows, say, 10% output of 'brokens'. One possibility is that the yield of whole rice has been understated by 5%. The other possibility is that the miller had milled unaccounted paddy, and had brought into the books only the 'brokens' obtained from the milling of the unaccounted paddy. Moreover, it is possible he had understated, to a corresponding extent, the yield obtained from the milling of the unaccounted paddy. In this way the miller reaps a double benefit i.e. he not only mills paddy outside the books, but also converts a portion of 'white' stocks of rice into 'black'.

3.3.18 Nowadays, the millers, while seeking to substantiate a higher than normal yield of 'brokens' rely on the fact that, in respect of rice, the Food Corporation of India and other government agencies have prescribed a tolerance limit as high as 17% for 'brokens'. It is essential to remember that the tolerance limit prescribed signifies the upper limit upto which the presence of 'brokens' will be tolerated in the rice supplied to FCI/ government agencies. It is designed to safeguard the interests of these agencies by curbing the proclivities of the millers to make quick profits by mixing large quantity of 'brokens' with the rice supplied. It has nothing to do with the yield of 'brokens' obtained on milling paddy. Hence the tolerance limit fixed by the aforesaid agencies should not be regarded as evidence to the effect that the yield of 'brokens' will be as high as 17%.

Case Study: During the course of search proceedings at the business premises of M/s XYZ, the statement of Sh. ABC was recorded. He was asked to intimate the yield of paddy. The specific question and answer as per statement are reproduced as under:

Table 4

<table>
<tr><th>S. No.</th><th>Ques. No.</th><th>Question</th><th>Answer</th></tr>
<tr><td>1</td><td>6</td><td>What is your job profile and job timing?</td><td>I am working as lab in-charge in M/s XYZ and I am doing, here, LAB inspection, quality checking and complete checking of processing of yield of paddy, my job timing 9:00 AM to 7:00 PM</td></tr>
<tr><td>2</td><td>7</td><td>How do you determine/ calculate the yield of paddy?</td><td>Determination/ calculation of yield of paddy per quintal details are as under:
<table>
<tr><th>Name of Paddy</th><th>Quantum of Yield of Brown Rice</th><th>Quantum of White/ Milled Rice/ Silky</th><th>Rice Product</th></tr>
<tr><td>1121 (Steam)</td><td>76 kg</td><td>65 kg</td><td>63 kg</td></tr>
<tr><td>1121 (Seila)</td><td>77 kg</td><td>66 kg</td><td>64 kg</td></tr>
<tr><td>1121 (Raw)</td><td>74.6 kg</td><td>64.5 kg</td><td></td></tr>
<tr><td>1509 (Steam)</td><td>74 kg</td><td>64 kg</td><td></td></tr>
<tr><td>1509 (Sella_aw)</td><td>45 kg</td><td>64 kg</td><td></td></tr>
<tr><td>1509 (Raw)</td><td>73.2 kg</td><td>63.2 kg</td><td></td></tr>
</table></td></tr>
<tr><td>3</td><td>8</td><td>Please once again confirm that oath has been administered on you and you have made aware of consequences of giving false statement.</td><td>Yes, I confirm that oath has been administered on me and was made aware of consequences of giving false statement.</td></tr>
<tr><td>4</td><td>9</td><td>Does yield depend upon the quality of paddy?</td><td>Yes, the yield depends upon the quality of paddy.</td></tr>
<tr><td>5</td><td>10</td><td>Please demonstrate the yield of paddy (quality wise) available at this time.</td><td>The demonstration of yield of paddy was done on 12/02/2016 and details are as under:
Demonstration of yield of paddy 1121 stream
<table>
<tr><th>S. No.</th><th>Quantity of Paddy</th><th>Brown Yield</th><th>White Rice</th><th>Rice Product</th></tr>
<tr><td>1</td><td>100 Gms.</td><td>76.8 Gms.</td><td>67.75 Gms.</td><td>64.85 Gms.</td></tr>
</table>
(Sella)
<table>
<tr><th>S. No.</th><th>Quantity of Paddy</th><th>Brown Yield</th><th>White Rice</th><th>Rice Product</th></tr>
<tr><td>1</td><td>100 Gms.</td><td>77 Gms.</td><td>70.375 Gms.</td><td>69.89 Gms.</td></tr>
</table></td></tr>
<tr><td>6</td><td>11</td><td>There is difference in yield as demonstrated and as is there, in company's data or told by you in answer of Q.No. 7. Please explain you why?</td><td>The difference in% of yield between as demonstrated on 12/02/2016 and I stated above in answer of question no. 7 is due to quality of paddy i.e. old/ New paddy.</td></tr>
</table>

The percentage of yield intimated by Sh. ABC is hereby compared with the percentage of yield shown by the assessee concern in his books of accounts. The details are as under:

Table 5

A.Y.	As Shown in Audit Report
2016–17	-
2015–16	63
2014–15	63
2013–14	63
2012–13	64
2011–12	-
2010–11	63

Table 6: As Intimated by ABC

Name of Paddy	Quantum of Yield of Brown Rice	Quantum of White/ Milled Rice/ Silky	Rice Product
1121 (Steam)	76 kg	65 kg	63 kg
1121 (Seila)	77 kg	66 kg	64 kg
1121 (Raw)	74.6 kg	64.5 kg	-
1509 (Steam)	74 kg	64 kg	-
1509 (Sella_aw)	45 kg	64 kg	-
1509 (Raw)	73.2 kg	63.2 kg	-

Table 7: As Per Demonstration

Demonstration of Yield of Paddy 1121 Steam				
S.No.	**Quantity of Paddy**	**Brown Yield**	**White Rice Milled**	**Rice Product**
1	100 gm.	76.8 gm.	67.75 gm.	64.85 gm.
(Sella)				
S.No.	**Quantity of Paddy**	**Brown Yield**	**White Rice Milled**	**Rice Product**
1	100 gm.	77 gm.	70.375 gm.	69.89 gm.

3.3.19 The books of accounts of the miller contain useful information from which it is possible to verify whether the miller had milled unaccounted paddy. The purchase tax paid by the miller, lorry hire charged/ incurred and the fuel/ electricity consumed are useful indices of the total volume of paddy milled. In appropriate cases a correlation must be attempted between the money laid out on these items and the volume of paddy milled.

3.3.20 In one case, it was found that the miller had stolen 17,845 units of electricity. From the details obtained from the Electricity Department it was possible to say that the assessee had stolen 11,130 units in the year and 6,715 units the next year. The quantum of paddy milled was calculated on the basis that, on an average, 1½ units are required to mill a bag of paddy (75 kg) and suitable additions were made.

3.3.21 Where the output of rice/ broken rice is suppressed, the sale proceeds thereof will naturally be kept outside the books of accounts. However, the miller quite often requires cash to defray expenses which are easily cross-checked. Again, the miller requires cash to repay the loans taken from banks and other financial institutions. To meet such cash requirements, the suppressed sale proceeds may be introduced as cash credits, a phenomenon which in its varied manifestations is too ubiquitous and well known. Alternatively, the suppressed output itself may be introduced in the books of accounts in the guise of purchases. In such cases the genuineness of the purchases must be examined in depth. If the alleged seller is a farmer, the inquiry should be directed towards ascertaining (i) whether he had the capacity to sell the quantity of rice/ broken rice in question, (ii) where he got the paddy milled, (iii) how he got the rice/ broken rice transported etc. If, on the other hand, the alleged seller is a dealer in rice/ broken rice, the inquiry must be geared to rule out the possibility of his having merely 'accommodated' the miller, without the goods having changed hands.

3.3.22 Verification of the Stocks Pledged with Banks

3.3.22.1 It is common knowledge that the miller obtains loan facilities from banks. The loan facilities extended by banks are of two kinds *viz.* Open Loan Cash Credit (OLCC), and Key Loan Cash Credit. Usually, the stocks of paddy/ rice available with the miller are hypothecated to, or as the case may be pledged with the bank. In the case of OLCC, the stocks remain in custody of the miller, and the stock position is reported to the bank through periodical statements. The stocks, be it noted, are merely hypothecated to the bank and not pledged with it. That is to say, they are not treated as direct, collateral security for the loan facility. The facility is allowed generally on the personal security of the partners of the miller. Cases have come to light where the undisclosed assets of the partners such as fixed deposit receipts standing in their names or in the names of their 'benamidars' have been clandestinely offered as security for large open loans.

3.3.22.2 Not infrequently, in the stock statements submitted periodically by it to the bank, the millers report inflated figures of stocks, with a view to secure a bigger open loan. The bank does not mind, because the loan has been advanced more on the personal security of the partners (or against collateral security clandestinely furnished by the constituent), and in any event, the stocks have been merely hypothecated and not pledged.

3.3.22.3 Key Loan Cash Credit facility, is granted against stocks pledged with the bank. The stocks are kept under the lock and key of the bank. Once KLCC is granted, the miller cannot get the stocks released, unless he liquidates an appropriate part of the loan. Since the stocks are pledged, the bank keeps records of the goods initially pledged, the releases made from time to time and of the balance stock. Such details are kept separately for each key loan sanctioned. In cases where the miller had taken KLCC, the AO should invariably obtain from the bank certified details of the stocks pledged, stock released etc. and cross-verify them with the stock register of the assessee; and make suitable additions to cover the excess stocks; if any, detected. In the case of key loan the question of over-stating the stocks for getting a higher loan cannot arise, for the stocks are pledged in the custody of the bank. If an assessee contends that the figures of stocks were inflated to obtain a bigger key loan the AO should make enquiries from the bank about the quantity and value of stock pledged.

3.3.23 Verification of Sales

3.3.23.1 The verification of sales in the case of rice mill is no different from the verification of sales in any other case. Thus, a copy of the assessee's accounts in the books of the merchants/ commission agents to whom the sales have been made must be obtained and verified with the books of accounts of the assessee. While doing so, both the movement of the goods and the flow of cash must be scrutinized critically. Antedating/ postdating of cash transaction is the convenient method adopted to disguise the payments made from out of moneys kept outside the books of accounts. Cross verification of the books of accounts of the assessee with those of the merchants/ commission agents may help in detecting bogus or havala entries made in the books of accounts of the assessee.

3.3.23.2 The supplies may also be made to the FCI/ other government agencies under the levy system account. The sales made to these agencies must be cross verified with the details obtained from the agencies. Once the miller discharges the obligation under the levy system, he is entitled to make free market sales. The respective State Government usually regulates the quantum of sales that can be made outside the State. Even within the State, sales to retailers may have to be made in accordance with the allotments made by the State Government.

3.3.23.3 In cases where the sales are covered by permits, the mode of concealment adopted by millers is to fraudulently use the same permit to transport rice/ broken rice more than once. This is particularly prevalent in areas where, thanks to the proximity of the border, the goods need to be hauled over short distances. Such malpractices can be detected only with the active cooperation of the Sales Tax and Civil Supplies Departments.

3.3.23.4 Rice bran is one of the products of paddy milling. Paddy contains approximately 72% rice, 5% bran and 22% husk. The bran obtained on milling raw paddy contains 15–18% oil; while bran obtained on milling parboiled paddy contains 22–25% oil. Rice bran oil is costly, can be put to a variety of industrial uses. Hence bran commands an attractive price. Bran as such is used as poultry feed.

3.3.23.5 Some States like Punjab regulate the sale of Rice bran. 50% of rice bran is required to be sold to poultry feed manufacturers and the rest in the open market. The millers are required to make the sales to poultry-feed manufacturers at controlled rates, while solvent-extraction units which manufacture rice bran oil are prepared to pay much higher price. Naturally, then, the millers prefer to sell bran to solvent extraction units rather than to poultry-feed manufacturers. To get over the regulations of government, the millers either understate the yield of bran; or mix crushed husk with rice bran and sell the mixture to poultry-feed manufacturers. Therefore, particular attention must be paid to the yield of bran, and the price at which it has been sold.

3.3.24 Recovery of Rice: The recovery of rice ranges between 67 to 68%. However, the recovery of Basmati rice ranges between 66 to 67%. The hulling of paddy starts in the month of October/ November near about Diwali and ends by March. A small quantity of the left-over paddy which is shown as closing stock is hulled in the first few months of the subsequent year. The rice millers have necessarily to maintain a production register prescribed by the marketing department which is known as the Levy register. This is maintained from October of the year to September of the subsequent year, i.e. from the start of the paddy season to the start of next season.

3.3.25 Rice Bran

3.3.25.1 The normal accepted recovery of rice bran varies 7 to 8%. A lower recovery rate calls for deep investigation. While examining the production and sale of rice bran it has been noticed in many a cases that though the closing stock of rice bran was nil and no hulling of paddy had been undertaken from first of April of the year up to the starting of the next paddy season, yet substantial quantity of rice bran is claimed to have been sold and sale proceeds credited in the books. Rice bran being a by-product of hulling of paddy, can be obtained only if paddy is hulled. It was therefore found that extra paddy had been hulled, and not accounted for in the books of accounts. This resulted in addition on account of unexplained investment in purchase of paddy at average rate of disclosed purchases, and further addition of profit on the sale of rice.

3.3.25.2 The State Governments procures paddy through many of its purchase Centres spread over the entire state. This paddy is compulsorily to be hulled by the rice millers as per the directions of the State Government. The rice produced is taken by the State Government by paying milling charges at fixed rates. However, the rice bran produced is not taken by the State Government and is left with the assessee for sale in the open market. The sale of this rice bran is not declared.

3.3.26 Paddy Husk

Normally, no record is maintained in respect of the paddy husk produced and sold. Generally, sale of paddy husk is shown as lump sum by issuing a cash memo on the last day of the accounting year in which even the name of the purchaser does not figure. However, it is necessary to examine the production and sale of paddy husk. After accounting for 67–68% recovery of rice, and 7–8% recovery of rice bran, the balance 25% is paddy husk which also includes a certain amount of dust and extraneous material. This paddy husk is normally piled up outside the mill premises. As such, pilferage of a small quantity out of the husk cannot be denied. Moreover, a small quantity out of this husk produced is also used by labourers as a fuel. Keeping in view these factors, the production of paddy husk is usually determined at 20% of the paddy hulled. This recovery @ 20% is also being assessed to by the Sales Tax authorities of the Tarai belt of UP. This has been accepted by the assessees. The paddy husk produced is utilised by sugar mills and distilleries as a fuel. The procurement price fixed by these sugar mills and the distilleries varies from Rs. 20–35 per quintal exclusive of the transportation charges. However, the sale price declared by the rice millers is much lower.

3.4 Examination of Profit & Loss A/c

3.4.1 By the very nature of things lot of payments are made to labour and unorganized sector. However, keeping in view the nature of business, type of machinery used and large-scale dealings with the farmers, the amount of depreciation, '*bardana*' expenses and labour payments require special attention.

3.4.2 While examining P&L account, special attention should be given to depreciation claim. It should also be verified as to whether the asset on which the depreciation is claimed was in existence and ready for use during the year. In one case the IAP pointed out that depreciation on boiler had wrongly been claimed at 100% by claiming it to be a high efficiency boiler though it was a normal boiler. It was then found that the boiler was not even ready for use during the year under consideration, as the installation expenses had been debited in the subsequent year.

3.4.3 In many cases, such units get substantial subsidy on machineries from State Government and Central Government. In such cases, it should be ensured that depreciation on plant and machineries is allowed only on the balance value of plant & machineries remaining after deducting the subsidy amount.

3.4.4 Vouchers in respect of all major expenses debited to the P&L a/c should be verified. The copies of account of all the major expenses should also be obtained. While examining expenses on account of salary, it should be seen as to whether any abnormal expenditure on such an account has been made on the last few days of the accounting year.

CHAPTER 13

Rubber Industry

1. INTRODUCTION

The rubber plant, called *Hevea Brasiliensis* is a native of the Amazon basin. It was introduced by British to Asia and Africa during late 19th century. It can be termed as the most far reaching and successful of introductions in plant history. Commercial cultivation of rubber in India started in 1902. Rubber is one of the most important raw materials for a variety of industries such as aviation, defence, railways, agriculture, medical, sports, transport and many other manufacturing industries. India is the sixth largest producer and second largest consumer of natural rubber in the world and also the fourth largest consumer of natural rubber & synthetic rubber put together. The rubber goods industry excluding tyre and tubes consists of 4550 small and tiny units generating about 5.50 Lakhs direct jobs. The rubber industry manufactured a wide range of products like rubber coats and aprons, contraceptives, footwear, rubber hoses, cables, camelback, battery boxes, latex products, conveyor belts, surgical gloves, balloons, rubber moulded goods, tyre and tubes etc.

2. TYPES OF RUBBER

The rubber industry uses three types of rubber, namely, Natural Rubber(NR), Synthetic Rubber(SR) and Reclaimed Rubber. The ratio of consumption of NR: SR worldwide is 47:53 while in India, it is 64:36.

2.1 Natural Rubber

2.1.1 The rubber growing regions in India can be classified under two major zones, traditional and non-traditional on the basis of agro-climatic conditions. Rubber cultivation in India has been traditionally confined to the hinterlands of the southwest coast, mainly in Kanyakumari District of Tamil Nadu and Kerala. The non traditional areas are the hinterlands of coastal Karnataka, Goa, Konkan Region of Maharashtra, hinterlands of coastal Andhra Pradesh and Orissa, the northeastern states, Andaman and Nicobar Islands etc.

2.1.2 The main crop from a rubber plantation is latex harvested by the tapping process. About 70–80 per cent of the crop from a rubber plantation is in the form of latex. The rest of the crop is constituted by field coagulum comprising of tree lace, cup lump and earth scrap. The latex which gets solidified in the tapping panel is

called the tree lace and in the collection cups is called cup lump. These are collected at the time of tapping. The latex spilt and/ or overflowed to the ground (earth scrap) when gets dried up is also collected as scrap once in a month.

Table 1: General Composition of Latex

Rubber	30–40%	Resins	1–2.0%
Proteins	2–2.5%	Sugars	1–1.5%
Ash	0.7–0.9%	Water	55–65%

2.1.3 Latex can be processed into any of the following forms:

i. Preserved field latex and latex concentrate.

ii. Sheet rubber.

iii. Block rubber.

iv. Crepe rubber.

Field coagulum can be processed only into crepe rubber or block rubber.

2.1.3.1 Preserved Field Latex: Field latex is preserved using suitable preservative for long term storage. The processing of preserved field latex consists essentially of adding the preservative (usually ammonia, minimum 1%) to the sieved latex, bulking, settling, blending and packing.

2.1.3.2 Latex Concentrate: This can be Prepared by One of These Two Methods:

i. **Concentration by Creaming:** The processing of latex into creamed concentrate involves the mixing of a creaming agent such as ammonium alginate or tamarind seed powder with properly preserved field latex and allowing the latex to separate into two layers; an upper layer of concentrated latex and a lower layer of serum containing very little rubber. The lower layer of serum is removed, leaving the latex concentrate having about 50–55% DRC (dry rubber content), which is often tested, packed and marketed.

ii. **Concentration by Centrifugation:** The processing of latex into latex concentrate by centrifugation involves the separation of preserved field latex into two fractions, one containing the concentrated latex of more than 60% dry rubber and the other containing 4–8% dry rubber (skim latex). Centifuged latex with 60% DRC is called CENEX. Centrifuged latex is today available commercially in two different verities with high ammonia (min. 0.7% of ammonia) and low ammonia (max. 0.3% of ammonia). The former is preserved solely with ammonia and later contains one or more preservatives besides ammonia. LA latex has several advantages which include better quality, lower cost of production by way of savings in preservatives, acid and low cost of effluent treatment.

2.1.3.3 Ribbed Smoked Sheet: Around 74.7% of NR produced in India is marketed as Ribbed Smoked Sheet. Latex is coagulated and rolled through a set of smooth rollers followed by a grooved set and dried to obtain sheet rubber. Depending upon the drying method, sheet rubbers are classified into two: Ribbed Smoked Sheets and Air Dried Sheets (Pale Amber Unsmoked Sheets).

2.1.3.4 Block Rubber/ Technically Specified Rubber (TSR): Technically specified rubber (TSR) is a modern marketable form of natural rubber produced from latex and field coagulum. The production of TSR started only during the 1960's, prior to which raw natural rubber was marketed in conventional forms like sheet and crepe for which only visual grading was done. From 1950's onwards well packed and scientifically characterized synthetic rubbers became commercially available in bulk quantities. To compete with synthetic alternatives, TSR was developed. TSR is produced in almost all NR producing countries. In India, TSR production started in the year 1973. It is marketed with quality certification from the Bureau of Indian Standards, under the name Indian Standard Natural Rubber (ISNR). At present, 6 grades of TSR are recognised.

Different Grades of TSR and its applications are as under:

i. **ISNR 3CV**: Produced from good quality field latex. It is used for the manufacture of tyres, engineering components, extruded and calendared products.

ii. **ISNR 3L:** Produced from good quality field latex and used for making light coloured products, feeding bottle teats, large industrial rollers, paper and printing industry.

iii. **ISNR 5:** Produced from field latex or high quality field coagulum. It is widely used in the manufacture of conveyor belts, cycle tubes, engine mountings, footwear etc.

iv. **ISNR 10, ISNR 20 and ISNR 50:** Produced from quality field coagulum. ISNR 10 and ISNR 20 grades are used by tyre manufactures. ISNR 50 is used for the production of less costlier non-critical applications like handmade hose, footwear, mats and moulded goods.

2.1.3.5 Crepe Rubber: Crepe rubbers are processed from fresh latex coagulum, field coagulum or cuttings of RSS. When any of these materials, after necessary preliminary treatments, is passed through a set of crepe making machines, crinkly, lace-like rubber is obtained. Crepe rubbers are classified into latex crepe and field coagulum crepe, depending on the starting material used. Pale latex crepe (PLC) and sole crepe are the two latex grade crepe rubbers. The crepe prepared from field coagulum materials fall into five types, namely Estate Brown Crepe (EBC), Thin Brown Crepe (Remills), Thick Blanket Crepe, *Flat Bark Crepe and* Smoked Blanket Crepe.

2.2 Synthetic Rubber: Synthetic rubber is a low cost alternative to natural rubber. Around 65% and 70% of all rubber goes into the production of tyres. Other main applications include binders for paper coating, carpet backing, moulded articles such as thin gloves and sealing strips.

2.3 Reclaimed Rubber: The waste rubber products are converted into products for reuse in rubber industry. The reclaiming process aims at conversion of vulcanized rubber product into a material of sufficient plasticity to enable it to be compounded and handled with rubber machinery or to re-vulcanize it by adding curatives. Some of the major uses are in Passenger Tire Carcass, in extruded and calendared products, animal mats used in stables, insulation tiles used in metro railways for reducing the noise level, tubeless tire liners etc.

2.4 Good & Services Tax (GST): After introduction of GST in India, rubber products industry tyre & tubes now fall into the category of GST Goods and have been included under the Chapter 40 of HSN Code for GST purpose.

3. ISSUES IN TAXATION

3.1 Income from Rubber Plantations as Agricultural Income: Claims of agricultural income from rubber plantations made in ITR may need verification so as to ensure that the agricultural receipts are genuine and are not a shield for unaccounted income. For such an exercise, a basic understanding of the cultivation of rubber, the yield per acre, number of trees per acre, the average cost of cultivation and market price is essential. It assumes significance in computing the income from the manufacture of rubber under Rule 7A.

3.1.1 Some of the unique features of rubber plantations in India are as under:

i. Rubber plantations in India are usually on sloping and undulating lands. Contour terraces are made for water retention and soil conservation.

ii. Unlike tea plantations, majority of the rubber plantations are of small holding sizes. Currently, nearly 76 per cent of rubber estates are less than 200 hectares in

area and nearly 34 per cent are less than 40 hectares.

iii. Being a perennial crop, there is a gestation period of 7–8 years followed by 15–30 years of yielding phase

iv. The Rubber Board provides subsidy to the growers to compensate for the cost incurred during the pre-bearing period. All rubber holdings are registered with the Rubber Board.

v. Inter cropping can be done only during the gestation period.

vi. Some amount of processing is necessary at the farm gate, as fresh latex cannot be kept for long without preservative treatment. Some farmers also convert the latex into sheets.

vii. After the useful life of rubber, the plantations are subjected to slaughter tapping. This technique is used for extracting maximum latex during a specified short period from estates which are earmarked for replanting.

3.1.2 To determine the number of trees per hectares

3.1.3 Average Yield: In order to calculate the yield per acre, the statistics published by the Rubber Board can be used reliably.

3.1.4 Average Cost of Cultivation: The cost of production varies with the size of holdings and the location. The Centre for Development Studies Trivandrum publishes research papers on the average cost of cultivation. Such data can also be requisitioned from the Rubber Board.

3.1.5 Market Prices of Rubber: Collection, compilation and dissemination of natural rubber prices are done by the Market Promotion Division of Rubber Board. This includes daily, weekly, bi-weekly, monthly and yearly prices of various grades of natural rubber in the domestic as well as international markets. The price data is disseminated through print and visual media. In addition, it is made available to the public by Rubber Board websites: www.rubberboard.org.in and www.indainnaturalrubber.com and through IVRS(0481-2571232). Association of Natural Rubber Producing Countries, Malayasia; www.anrpc.org: The website gives the daily prices of latex, TSR and RSS in major markets like Bangkok, Kuala Lumpur and Kottayam.

Table 2: Spacing

Metres	Feet	No. of Plants/ Ha	No. of Plants/ Acre
Rectangular System			
5.5 × 3.7	18 × 12	499	202
5.8 × 3.0	19 × 10	566	229
5.8 × 3.4	19 × 11	514	208
6.1 × 3.0	20 × 10	539	218
6.1 × 3.4	20 × 11	489	198
6.4 × 3.0	21 × 10	511	207
6.4 × 3.4	21 × 11	467	189
6.7 × 3.0	22 × 10	489	198
6.7 × 3.4	22 × 11	445	180
7.0 × 3.0	23 × 10	467	189
Square system			
4.3 × 4.3	1 4 × 14	549	222
4.6 × 4.6	15 × 15	511	194
4.9 × 4.9	16 × 16	479	170

Source: Rubber Board

Table 3: Annual Trends in Area, Production, Consumption, Import, Export and Average Prices of Natural Rubber in India

Updated on 30/07/2019

Year (April to March)	Rubber Area (ha)	Tappable Rubber Area (ha)	Production (Tonne)	Average Yield (kg/ha)	Consumption (Tonne)	Import (Tonne)	Export (Tonne)	Average Price of RSS-4 at Kottayam (Rs./100kg
2005–06	597,610	447,015	802,625	1,796	801,110	45,285	73,830	6,699
2006–07	615,200	454,020	852,895	1,879	820,305	89,799	56,545	9,204
2007–08	635,400	458,830	825,345	1,799	861,455	86,394	60,353	9,085
2008–09	661,980	463,130	864,500	1,867	871,720	77,762	46,926	10,112
2009–10	686,515	468,480	831,400	1,775	930,565	177,130	25,090	11,498
2010–11	711,560	477,230	861,950	1,806	947,715	190,692	29,851	19,003
2011–12	734,780	490,970	903,700	1,841	964,415	214,433	27,145	20,805
2012–13	757,520	504,040	913,700	1,813	972,705	262,753	30,594	17,682
2013–14	778,400	518,100	774,000	1,629	981,520	360,263	5,398	16,602
2014–15	795,135	533,675	645,000	1,443	1,020,910	442,130	1,002	13,257
2015–16	810,800	558,900	562,000	1,437	994,415	458,374	865	11,306
2016–17	818,000	584,600	691,000	1,553	1,044,075	426,188	20,920	13,549
2017–18	820,900	612,000	694,000	1,458	1,112,210	469,760	5,072	12,980
2018–19p	822,000	640,000	651,000	1,453	1,211,940	582,351	4,551	12,595
* Provisional								

3.1.6 Nature of Income: Income from rubber can assume the character of agricultural income only in the hands of the farmer who has grown the rubber trees in India. The following points needs to be taken into consideration while making assessment:

i. Receipt of sale of rubber trees is an agricultural income in the hands of the farmer if the conditions for land being agricultural in nature are satisfied. However, it is taxable to Income-tax in the hands of a trader.

ii. Income from sale of latex, field coagulum or rubber trees earned by middlemen and traders who obtain contracts for slaughter tapping are to be taxed under Income-tax.

iii. As per *Explanation 3 to Section 2(1A)*, any income derived from saplings or seedlings grown in a nursery is agricultural income w.e.f. 01/04/2009.

iv. Income from manufacture of certain types of rubber is to be computed under Rule 7A.

v. It was held in *CIT vs State Farming Corporation of Kerala Ltd* (2011) 199 Taxmann 371 (Ker) that income from scrap generated in industrial activity of processing latex into products referred to in Rule 7A(1) has to be brought to Central Income-tax, while income from sale of scrap rubber which is generated in the course of extraction of rubber latex from trees cannot be brought to Central Income-tax by applying Rule 7A because such scrap is generated in the course of taking yield which is a purely agricultural operation.

vi. In case of imports and exports, it may be necessary to examine the transfer pricing angle.

3.1.7 Rule 7A Inserted w.e.f. 01/04/2002: This rule is applied in cases where the rubber grower not only sells the produce as such but also manufactures various types of rubber as specified in the Rule from his own produce.

7A (1) Income derived from the sale of centrifuged latex or cenex or latex based crepes (such as pale latex crepe) or brown crepes (such as estate brown crepe, remilled crepe, smoked blanket crepe or flat bark crepe) or technically specified block rubbers manufactured or processed from field latex or coagulum obtained from rubber plants grown by the seller in India shall be computed as if it were income derived from business, and thirty-five per cent of such income shall be deemed to be income liable to tax.

(2) In computing such income, an allowance shall be made in respect of the cost of planting rubber plants in replacement of plants that have died or become permanently useless in an area already planted, if such area has not previously been abandoned, and for the purpose of determining such cost, no deduction shall be made in respect of the amount of any subsidy which, under the provisions of Clause (31) of Section 10, is not includible in the total income.

3.1.7.1 While applying this rule in the computation of income from manufacture of rubber, the AO may ensure that the value of rubber is not inflated. The AO may rely on the return of Agricultural Income submitted by the assessee. The AO can also do an estimate of the yield based on data available with the Rubber Board. The Rubber Board can provide authentic data of the number of plants and their age. The quality of rubber is of prime importance in determining the prices. A statement of daily production and consumption of rubber can be obtained. The reasonableness of the quantity and the quality of the input of rubber for manufacturing purposes may be judged with reference to the type and the specifications of the finished products.

3.1.8 Items of manufacturing expenses need close scrutiny. The AO should have a fair idea of the cultivation costs in that locality. The manufacturing process should be gone through in detail and job works that are outsourced may require cross verification.

3.1.9 Explanation 7 to Section 43(6) of the IT Act deals with the computation of depreciation claimed under this Rule. WDV is required to be computed by deducting the full depreciation attributable to composite income.

3.2 Rubber Based Industries and Taxation Issues

3.2.1 The rubber manufacturing industry is fragmented in structure with around 6000 manufacturing units, comprising of 30 large-scale, 300 medium-scale and around 5600 small and tiny units. With an estimated turnover of US$ 12.7 billion, the industry employs 500,000 people. Based on consumption patterns, rubber industry in India can be categorised into two sectors-the tyre sector and non-tyre sector. The tyre sector, comprises all types of automobile tyres, conventional as well as radial tyres-and tyre exports. Globally, automobile tyres constitute the single-largest consumer segment, for natural rubber. The non-tyre sector comprises the medium-scale, small-scale and tiny units, which produce high technology and sophisticated

industrial products. The small-scale units account for over 50 per cent of rubber goods production in the non-tyre sector.

3.2.2 Various manufacturing processes are employed in rubber based industries. Manufacturing processes vary with the type of products. Knowing the manufacturing processes can help the AO understand the costs involved. For instance, some rubber based industries may require little manual labour whereas others like footwear may engage more manual labour. The AO should have a clear idea about the input-output ratios. Production register and log book are useful records to check the correctness of wages paid to labourers.

3.2.3 The main fact to be verified is the quantitative and the amount-wise tally of the raw materials consumed and the finished products. While there may be a stock tally in respect of the finished products in large factories, there may not be such a tally in factories producing rubber toys, mats etc. Abnormal consumption of raw materials, increase in labour charges etc. may indicate suppression of production in those cases. It is therefore advisable to take extracts of purchases from the dealer's accounts and trace it back to the factory producing those articles. This sort of verification is likely to prove successful in detecting the suppression of sales in the case of a factory producing rubber toys and similar products. It may also be noted that the quantity of costly chemicals used in manufacturing is relatively low and the main cost incurred will be the cost of rubber as the raw material.

3.3 Ancilliary Industries

3.3.1 Rubber Seed Oil Industry: Rubber seed is one of the by-products of natural rubber plantations. It is procured for nursery as well as industrial purposes and is marketed in seed and kernel forms. The seed from Kerala is entirely used for processing while that from Tamil Nadu is used for nursery purposes. Rubber seed reaches the processing industry with and without the help of brokers at village and town level on commission basis. Processing industry is mostly concentrated at Virudhunagar in Tamil Nadu due to historical and natural factors. Rubber seed is processed as oil and cake. Rotary system is mainly employed for processing.

3.3.2 Rubber Wood Industry: Processed rubber wood is used extensively in house hold furniture panelling and flooring. Rubber wood is a raw material used in the plywood industry. The cost of rubber wood being lower than other traditional hard wood used for furniture, this industry is a high profit industry and requires detailed investigation into inflation of prices and suppression of production.

4. CONCLUSION

4.1 The outlook for the Indian rubber industry on the whole is positive. Around 70% of the domestic demand comes from the automobile sector. The export of rubber & articles thereof was worth Rs. 20,915 Crores in FY 2017–18. Rubber futures contracts are traded on three National Multi Commodity Exchanges, viz NMCE, NCDEX and MCX. The challenges facing the rubber industry are chiefly operational challenges, innovation needs, technology adoption, marketing challenges, material costs-mastering the volatility, price reduction pressure, rising labour costs and inventory management.

4.2 Studies show that the carbon sequestration potential of natural rubber trees is much greater than most tree species commonly used

in afforestation/ reforestation programmes. Studies at the Rubber Research Institute of India (RRII) and elsewhere have established the excellent carbon sequestration capacity of natural rubber plantations, which is roughly in the range of 7–9 t C per ha per year or more. From a total area of about 0.8 m ha of natural rubber in India, we have about 5.6 to 7.2 mt C for sale in the Kyoto market every year which is 11 to 14 per cent of the combined demand for carbon credit by Japan and the European Union (50 mt C per year). But this market can be tapped only if natural rubber plantation is explicitly included for carbon crediting under the Kyoto Protocol.

CHAPTER

14

Seafood, Aquaculture & Hatcheries

SEAFOOD INDUSTRY

1. INTRODUCTION

1.1 Indian fisheries and aquaculture is an important sector of food production providing nutritional security, besides livelihood support and gainful employment to more than 14 million people, and contributing to agricultural exports. With diverse resources ranging from deep seas to lakes in the mountains and more than 10% of the global biodiversity in terms of fish and shellfish species, the country has shown continuous and sustained increments in fish production since independence. The total fish production during 2017–18 is estimated to be 12.60 million metric tonnes, of which nearly 65% is from inland sector and about 50% of the total production is from culture fisheries, and constitutes about 6.3% of the global fish production.

1.2 Paradigm shifts in terms of increasing contributions from inland sector have been significant over the years. With high growth rates, the different facets, *viz.*, marine fisheries, coastal aquaculture, inland fisheries, freshwater aquaculture, and coldwater fisheries are contributing to the food basket, health, economy, exports, employment and tourism of the country.

1.3 More than 50 different types of fish and shellfish products are being exported to 75 countries around the world. Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. 45,106.89 crore in value. This accounts for around 10% of the total exports and nearly 20% of the agricultural exports, and contribute to about 0.91% of the GDP and 5.23% to the Ag-GVA of the country. The commercial fishes are majorly classified as under:

Commercial Fishes

- Crustaceans
- Molluscs
- Elasmobranchs
- Teleosts
- Scombroids
- Perches
- Sciaenids
- Carangids
- Ribbon Fish
- Cat Fish
- Clupeids
- Flat Fish
- Other Fishes

1.4 With over 2.4 lakh fishing crafts operating along the coast, 7 major fishing harbours, 75 minor fishing harbours and 1,537 landing centres are functioning to cater to the needs of over 4.0 million fisher folk. For promoting aquaculture, 429 Fish Farmers Development Agencies (FFDAs) and 39 Brackish water Fish Farms Development Agencies (BFDAs) were established in the country. The annual carp seed production is to the tune of 40 billion fry and that of shrimp is about 54 billion PLs, with increasing species diversification in the recent past. Besides large-scale freshwater food fish culture, ornamental fish culture and high value marine fish farming are gaining importance in the recent past.

1.5 Some Statistics on Fisheries and Aquaculture in India are as under (2017–18):

Indian Fisheries	
Global position	3rd in Fisheries 2nd in Aquaculture
Contribution of Fisheries to GDP (%)	0.91
Contribution to Agril. GDP (%)	5.23
Per capita fish availability (Kg.)	9.0
Annual Export earnings (Rs. In Crore)	45,106.89
Employment in sector (million)	14.0

Resources	
Coastline	8118 kms
Exclusive Economic Zone	2.02 million sq. km
Continental Shelf	0.530 million sq. km
Rivers and Canals	1,95,210 km
Reservoirs	3.150 million ha
Ponds and Tanks	2.414 million ha
Flood Plains lakes and derelict waters	0.796 million ha
Brackishwaters	1.240 million ha
Estuaries	0.290 million ha

Some Facts	
Present fish Production (Capture)	7,0 mmt
Inland	3.2 mmt
Marine	3.8 mmt
Potential fish production	8.4 mmt
Fish seed production	40,000 million fry
Hatcheries	1,604 units
FFDA	429
BFDA	39

2. FISHERIES

2.1 India is the second largest fish producer in the world with a total production of 13.7 million metric tonnes in 2018–19 of which 65 per cent was from inland sector. Almost 50 per cent of inland fish production is from culture fisheries, which constitutes 6.5 per cent of global fish production. The sector has been showing a steady growth in the total gross value added and accounts for 5.23 per cent share of agricultural GDP. It is also a major producer of fish through aquaculture and ranks second globally after China. The fish availability pattern in India is typical of tropical waters. Indian fishery resource consist of a large variety of species of fish and shell fish, e.g. sardines, mackerel, Bombay ducks, sharks and ray perches, pomfrets, seer fishes, flying fish, tunas and tuna-like fishes.

Indian marine prawns contribute substantially to the export earnings from marine products. It is a major producer of fish and shellfish through aquaculture globally, apart from possessing a number of other flourishing sectors with vast resources and potential. Presently, the country's annual fish production is at a high of 10.07 million metric tonnes. As the second largest country in aquaculture production, the share of inland fisheries and aquaculture has gone up from 46 per cent in 1980s to over 85 per cent in recent years in total fish production.

2.2 The best fishing season for the country as a whole is during October to December, when all the maritime states of the West coast of India record high landings. For Maharashtra and Gujarat the period July to September, and for Kerala and Karnataka the period April to June, are relatively poor. On the east coast conditions vary from state to state. In West Bengal and Orissa, the peak fishing period is during October to December, while in Andhra Pradesh and Tamil Nadu, it is from January to March. Fishing is relatively poor in these two states during the period April to June.

2.3 Small-scale fishing plays a significant role in the Indian fisheries. A large number of active fishermen employing indigenous crafts and gears, and following traditional methods are engaged in small scale fisheries. They contribute about 65% of the total marine fish production of the country.

2.4 Coastal mechanization programme has been one of the main thrusts in the development of marine fisheries in India. In order to popularize use of mechanized boats, scheme of subsidizing a part of the cost of construction of boats was introduced. Over the years, the subsidy was progressively tapered off, and the beneficiaries were encouraged to avail of institutional finance. Refinance facilities at lower rates of interest are offered by the Agricultural Refinancing and Development Corporation.

2.5 In order to stimulate indigenous construction, the ship building yards are permitted to import designs and drawings of fishing vessels from abroad. They can also avail services of foreign experts to acquire the requisite technology. Loans to the extent of 95% of the cost of vessels are available from the Shipping Development Fund. In the case of imported vessels, loans are available to the extent of 90% of the cost.

2.6 The change in export pattern from traditional items to export of processed fishery products is a significant feature. The recent trends are towards increased exports of processed and frozen fishery products to newer export markets e.g. Japan, Taiwan and South Eastern Asia.

2.7 Quality Control: For ensuring high quality of marine exports a scheme of quality control and pre-shipment inspection was introduced, under the Export (Quality and Inspection) Act, 1963. An Export Inspection Council was also setup to advise the Government of India on quality control of various products exported from Indian ports. The Act empowers the Government of India to notify the products for compulsory quality control and pre shipment inspection. Various marine products e.g. frozen and canned shrimp, dried fish, dried prawns, dried shark fish etc. were brought under this Act. The standards laid down for each item are internationally accepted, and can be classified into 4 categories-physical, organoleptic, analytical and bacteriological. Marine Products Export Development Authority has laid down hygiene standards for fishing vessels, processing plants, storage premises etc.

2.8 The Marine Products Export Promotion Council was setup to promote export of marine products from India. This body was renamed as "Marine Products Export Development Authority", and was vested with more powers including development of production for export. Its functions include registration of fishing vessels, processing plants and infrastructure facilities, laying down standards and specifications for marine products, improving the marketing of

marine products overseas by providing market intelligence, market promotion activities, supply of information on the types of products in demand in different countries, rendering financial or other assistance to exporters, regulation of export of marine products, and training in different aspects of export of marine products.

3. PRODUCTION

3.1 In the context of marine products, production simply means harvesting at sea. Fishermen using traditional crafts, and to a limited extent motorized versions of traditional crafts, harvest the bulk of the quantity exported. A few corporates using more sophisticated fishing vessels harvest the balance. Since the export trade is in the hands of the organized sector, the fish landed by the fishermen are purchased by the units in the organized sector. From the point of view of the exporters in organized sector, the term 'production' by and large means 'purchase'.

3.2 Processing for Export

3.2.1 Marine products are exported after they are block-frozen. Therefore, quick freezing of marine products is essential for the needs of the export markets. Quick-freezing was introduced in the early fifties, and since then a large number of freezing plants have been setup in different parts of the country close to the coastal areas. Canning as a means of preservation of fish, is ideally suited for a tropical country like India, because it does not need special storage conditions as required in the case of frozen fish. Further, mackerel and sardines, which are abundant during a short period of the year, are ideal fishes for canning purposes. However, canning of fish has not made much advance.

3.2.2 Canned products covered by Indian Standards are prawns in brine, pomfret in oil, brine and its own juice, tuna in oil, and crab meat in brine and solid pack. Specifications relate to can exterior, vacuum in the can, volume and nature of filling medium, drained weight of contents as percentage of water, capacity of the can, disintegration period of the material, colour, texture and flavour of the product, and extent of extraneous materials. Sodium chloride and citric acid in filling brine (in case of brine packs), proportion of water in filling medium (in oil packs), commercial sterility and maximum limits of toxic elements in all such commodities, have also been prescribed.

3.2.3 Commercially, the terms, "shrimp" and "prawn" represent the same product, in most of the markets. But a clear distinction is made between them in the UK and continental markets, where "shrimp" represents the small size ones. In India the exportable varieties of shrimps are identified under five broad classification

i. Karikadi (*Parapenaeopsis Styliffera*).
ii. Poovalan (including "*Thelly Chemmeen* and Chingiri" *Metapenaeus Dobsone*).
iii. Kazhandan ("Jinga" *Metapenaeus Affinis*).
iv. Naran (*Penaeus Indicus*).
v. Karachemmeen (*Penaeus Monodon*).

Normally, 'Naran' refers to very big size shrimps, 'Kazhandan' to medium size, while 'Poovalan' corresponds to small size shrimps. However, 'Karachemmeen' is the biggest among all and is generally referred to as king prawn or tiger prawn.

3.2.4 After the procurement of the fish, shrimps from the fishermen directly or through suppliers at the landing Centres, the raw fish/ shrimps are taken to the peeling sheds, where the heads and tails are cut off or heads and shells are removed and then deveined according to requirement. The processed fish/ shrimps are thereafter taken to processing units and are kept in adequate quantity of ice to prevent decay.

3.3 Processing of Shrimps: The methods of processing of shrimps vary according to the requirement of the type of shrimps for export market.

i. **Headless-shell-on Shrimps:** Fresh raw shrimp is washed in chlorinated water. The head is then removed and the shrimp is

washed thoroughly before it is taken for grading and freezing.

ii. **Peeled and Deveined Shrimps:** Shrimps are de-headed first, shells peeled off, and the veins completely removed. The meat is then washed.

iii. **Peeled, Deveined and Cooked Shrimps:** Peeled and deveined shrimps of small size are cooked in 3–5% boiling brine for about 5 minutes and then, allowed to cool.

iv. **Cooked and Peeled Shrimp:** Raw shrimps are washed well and then cooked in 7 to 10% boiling brine for 2–3 minutes. Cooked shrimps are then cooled in ice-cold water containing 3–5% salt. Thereafter, head and shell are removed. These are washed in chlorinated water.

v. **Peeled and Undeveined Shrimp:** This is a special preparation meant for the Japanese and European markets. In this case the veins are not removed though the shrimps are de-headed and shells peeled off.

3.4 Grading: Processed shrimps are graded before they are sent for freezing. Grading is based on the number of shrimps of the same size per pound of weight. Thus the grade 16/20 indicates that a pound of shrimps of this grade contain 16–20 shrimps of the same size.

3.5 Freezing: Graded product is block-frozen next. Graded material is arranged mostly in 5 lb. or 2 kgs (plus about 10% more to compensate the drip loss), directly in freezing traps or in waxed cartons lined with polythene placed in freezing trays. Adequate quantity of ice water is added and the trays are kept in the freezer. Freezing takes place between minus 30 °C to minus 40 °C, in about 3–4 hours, in a contact type plate freezer. When freezing is over the trays are removed from the freezer. The frozen material is in the form of slabs hard as stone.

3.6 Packing: The slabs are wrapped first with polythene paper and then packed in waxed carton. Ten such slabs (either 5 lb. blocks or 2 kgs blocks) are packed in a master carton made of corrugated paper board. Thus, a packed master carton would weigh 50 lb net or 65 lb to 70 lb. Gross. The packed master carton is tightened with plastic hoops. The packed material is always kept in cold storage at a temperature of around minus 23 °C.

4. TAX INVESTIGATIONS

4.1 Export of sea food is in the hands of a few corporate and non-corporate entities. These entities own fishing vessels and harvest marine products. However, large part of the export is from out of the purchases made by them from artisanal fishermen. The purchases are made to some extent directly from the fishermen, and to a large extent from the middlemen who in turn purchase fish from the fishermen. Some of the middlemen have their own arrangements for getting products processed and block frozen. The smaller entrepreneurs, get their products processed and frozen on hire at other factories.

4.2 Verification of Purchases

4.2.1 The landing Centres of catch of fish are also the purchasing Centres. The inherent characteristics of the industry i.e. illiteracy and poverty of the fishermen, who are the chief source of supply, and the highly perishable nature of marine products are two factors which offer big merchants/ exporters abundant scope for suppressing their real income, by fabricating false evidence in support of the purchases. The purchases of prawns, fish etc. made by the exporter are generally evidenced by his own 'bought notes'. Even though the 'bought notes' are signed by the fishermen (i.e. the seller), it is very difficult to verify the genuineness of these notes. Often, the seller's signature is taken on blank 'bought notes'. Again, there is no foolproof evidence of the identity of the seller. The system thus affords ample scope for, inflation of purchases, both in terms of quantity & value and introduction of totally bogus purchases. Besides, the highly perishable nature of prawns

and other fish, militates against there being any uniformity in the purchase price paid for the same variety in the same area and on the same day. The availability of both ice and conveyance is another operative factor. For example, if ice or conveyance is not available, the fishermen are only too anxious to part with their catches for any price. Again, there are various counts and varieties of prawns, whose value differ from one another.

4.2.2 Often bogus purchases are shown on credit. However, in fishery industry, purchase of fish on credit never takes place, because the fishermen, being poor, demand the sale proceeds immediately on effecting the sale. In fact exporters give the suppliers monies in advance against future purchases, to ensure continuous supply. The receipt of advance money by the supplier binds him to the exporter, as a result of which the supplier is compelled to sell his catches to that exporter.

4.2.3 The price of fish fluctuates widely, depending upon the volume of landed fish. When exceptionally large volume of fish is landed, the price dips, and on these occasions the fishermen are at the mercy of the buyers. On such occasion the fishermen, stop fishing for a couple of days. Given adequate supply of ice, it is possible for them to stagger the sales over a couple of days. Again, if adequate supply of ice is not available, the fishermen are forced to sell-off the catch at very low prices. From the point of view of investigation of accounts such occasions assume significance. The exporters stock up large quantities of fish at very low prices on such occasion, and doctor the 'bought notes' to make it appear as though the purchases were made on days when the prices, were high. The AO must, therefore, collect information regarding the dates on which the prices were ruling high, and the dates on which fishing was abandoned for one reason or the other. During monsoon season, as also on stormy days, no fishing is generally done. If the details of no-fishing days are available, the AO will be able to examine more closely the purchases shown on those dates. Statistical data on the quantum of fish landed, collected by the Central Marine Fisheries Research Institute is useful. The Institute has divided entire Indian Coast into Zones, of about 20–30 landing Centres. From each Zone, a trained field staff collects information on the fish landings, gears employed, effort expended, and data on size, weight and maturity conditions of the major commercial species, price structure etc.

4.2.4 In the case of exporters who harvest fish with the help of their own fleet of vessels, the question of verifying the correctness of the total quantity of fish landed assumes significance. As such details of the quantum of landed fish are furnished by the assessee himself, there is no scope whatsoever to cross-verify these details from an independent source. Every person who sets out to sea in vessels has to intimate to the Port authority the total number of trips done by him each day. But the details of the catch is not furnished. The details regarding the number of trips made by each vessel could be correlated to the total catch to obtain a general idea of whether the assessee has properly disclosed the details of the total catch. For example, if the details furnished by the assessee show frequent fruitless trips that by itself will indicate the need for more detailed and closer scrutiny of the case. There is internal evidence which enables one to cross-verify the details of catch. As pointed out earlier, the Export Inspection Agency conducts pre-shipment inspection. The Agency issues a certificate of inspection in respect of the goods inspected by it, without which the product cannot be exported. In this certificate the nature of the product, the date of processing and the total number of packs permitted to be exported are all given. The packs inspected are identified by code numbers. The code numbers enable the AO:

i. To ascertain the age of the stock of frozen products on any day;

ii. To cross-verify the details of the catch as also purchases by working backwards.

4.2.6 In another case, the assessee had in a particular month claimed to have made certain credit purchases. With the help of the data contained in the certificates issued by the Export Inspection Agency, it was conclusively proved that the assessee not having processed any stock in the month in question, the alleged credit purchases were fictitious.

4.2.7 Since marine products are highly perishable they are processed the very day. In exceptional circumstances, when the catch is landed late in the night, the processing may be done early next morning. Therefore, the quantum of the product processed is an important internal evidence having a close and direct relation to the quantum of catch and/ or purchases. One of the important techniques adopted by the Assessing Officers to detect suppression or inflation of purchases or suppression of sales, is to call for fortnightly or monthly details of purchases and sales, and to examine whether any adverse stock position comes to light, by correlating the quantum processed and the quantum landed and or purchased over a very short interval, of say two to three days.

4.2.8 Another important aspect of assessees harvesting shrimps with the help of their own fleet of vessels, is that while harvesting shrimps in an area which abounds in shrimps, a large variety of other fish also gets caught. In fact, the quantity of fish caught is much more than that of shrimps caught. For example, if a trawler catches say, 10 tonnes of shrimps in an area, it gets at least 30 to 40 tonnes of mixed fish. The AO would do well to inquire into the mode and manner of disposal of such fish so as to ensure that the moneys realised out of sale of such fish has been properly accounted for.

4.3 Verification of Processing Results

4.3.1 Prawns/ shrimps are converted into one of the following forms:

i. Headless-shell-on shrimps.
ii. Peeled and deveined shrimps.
iii. Peeled, Deveined and Cooked shrimps.
iv. Cooked and Peeled shrimps.
v. Peeled and un-deveined shrimps.

The yield on conversion of whole prawns/ shrimps differs widely. The exporter takes advantage of the variant nature of yield, and generally avoids furnishing to the Assessing officer item-wise breakup of the input and output. The AO should call for the qualitative and quantitative details in such cases, and see whether the processing results are reasonable.

4.3.2 The Central Institute of Fisheries Technology, Cochin had published a paper on the average yield in Volume XII (1975) of "Fisheries Technology" (Pages 125 to 130). For this they have collected data on the total quantity of whole prawns of different species handled daily by the factories and the quantity of PD (Peeled and Deveined), HL (Headless), etc. produced after conversion, for a period of one year (excluding the monsoon months of June, July, August and September). The following Tables 1(a) to 1(d) indicate the mean yield, standard deviation, and 95% confidence interval regarding the four species of prawns/shrimps for the months of January, February and March. The study indicated further that the yield of PUD (Peeled and Un-deveined) is more by 3 to 5% than PD (Peeled and Deveined). This aspect is significant from the point of view of investigation of accounts.

Table 1(a): Mean Yield, Standard Deviation, and 95% Confidence Interval Metapenaeus Dobsoni (Poovalan)

Month	No. of Observations	Mean Yield%	SD	95% (CI)
January	23	46.89	2.27	45.91–47.87
February	18	46.58	2.23	45.47–47.69
March	21	45.76	1.49	45.08–46.44

Table 1(b): Metapenaeus Affinis (Kazhandan) Whole to PD

Month	No. of Days Observed	Mean Yield%	Standard Deviation (SD)	95% Confidence Interval (CI)
January	19	42.28	1.85	41.25–42.75
February	18	43.72	1.93	42.66–44.68
March	16	41.46	2.23	40.27–42.65

Table 1(c): Parapenaeopsis Styliffera (Karikadi) Whole to PD

Month	No. of Observations	Mean Yield%	SD	95% (CI)
January	19	37.14	1.97	36.18–38.08
February	15	36.37	0.71	35.98–36.76
March	15	33.57	1.97	22.48–34.65

Table 1(d): Penaeus Indicus (Naran) Whole to Headless

Month	No. of Observations	Mean Yield%	SD	95% (CI)
January	13	64.83	4.95	61.84–67427
February	16	65.91	2.17	64.75–67.07
March	19	64.85	1.79	63.99–65.71

4.3.3 Drip loss is another important point that needs consideration. On freezing, fish meat loses a little weight. To compensate this loss in weight, which is called 'drip loss', some extra quantity of prawns/ fish is put in the freezing trays. For example, to obtain a 2 kg (net weight) pack of frozen shrimps/ prawns about 2.2 kg of prawns/ shrimps are used, the extra 200 gm, being added to compensate for drip loss. The significance of drip loss lies in the fact that the exporters generally tend to inflate loss on this account. Suppression of sales is the natural corollary of such a manipulation. The AO should examine closely the extra fish/ prawns added to compensate drip loss, correlate the quantity added to the quantity purchased and the quantity in stock. Such verification may be made in respect of fairly short intervals. Though no fixed percentage can be provided regarding the extent of drip loss incurred in freezing, yet as a general guideline it may be stated, that the normal drip loss in frozen prawns is 5% in the case of HL variety, 10% in the case of PD type, and 3% in the case of cooked prawns.

4.3.4 In one case an exporter had claimed abnormally high percentage of wastage in processing of shrimps. An analysis of sales and stock position furnished by the assessee during the three month period commencing from 1st January revealed that he had produced 1,98,744 kg. during this period as below (Table 2)

Table 2

Particulars	Weight (kg)
Sale	242,166
Add: Stock as at the end of the period	
Less: Stock as at the beginning of the period	44,280
Production during the period	198,744

There was no dispute about the total exports made during the period. The books of account of the assessee revealed that during the said period the assessee had purchased/ landed the following quantities which were processed (Table 3)

Table 3

Particulars	Weight (kg)
Prawn meat purchased	170,979
Whole prawn purchased	7,900
Own catches	202,643

The prawn meat purchased by the assessee did not require any processing before it was Block frozen therefore the AO proceeded to work out the total yield on processing of the own catches and whole prawns purchased as follows (Table 4)

Table 4

Variety	Form to Which Converted	Quantity	Percentage Yield	Quantity Yield
		kg	%	kg
Naran	HL	6,347	65.2	4,138.24
Kazhandan	PUD	866.5	49.41	428.13
Poovalan	PUD	51,402	45.5	23,387.91
Choodan	HL	6,160.5	67.41	4,152.79
Villan & Kara	HL	42.5	67.41	28.65
Karikadi	CP	33,173.3	35.2	11,677
Karikadi	PUD	104,651	38.69	40,489.47
Karikadi(own purchases)	PUD	7,900	38.69	3,056.51
			Total	87,358.7

The AO then proceeded to estimate the drip loss as detailed below (Table 5)

Table 5

	% of Drip Loss Estimated	Drip Loss (kg)
On 11,677 kgs (cooked prawns)	3	350
On 75,681.70 kgs	10	7,568
On 1,70,979 kgs (Meat purchased)	10	17,098
Total		25,016

Thereafter the AO computed the total production of block-frozen shrimps at 2,33,321.70 kgs as detailed below (Table 6)

Table 6

	Wt. in kg
Prawn meat purchased	170,979
Prawn meat produced out of purchases and own catches	
Estimated production 87,358.70 less Drip loss 25,016.00	62,342.7
Total	233,321.7

Since the production accounted for in the books of account was only 1,98,744 kgs, the AO concluded that the excess production of 34,577 kgs (2,33,321 kgs (-) 1,98,744 kg) needed to be explained. As he was satisfied that there was no leakage at the sales end, he came to the final conclusion that the excess production was relatable to bogus purchase debited in the accounts. Working backwards and adopting the drip loss of 10%, he quantified the bogus purchases at 38,419 on payment of vessel hiring kgs and made suitable addition on this count.

4.4 Verification of Expenses

4.4.1 The verification of expenses in the cases of assessees exporting marine products is no different from verification of expenses in any other case. Again, seafood cases afford ample scope for inflation of expenses. The typical expenses in such cases are:

i. Expenses on peeling and grading.

ii. Expenses on purchasing ice and renting cold storage space.

4.4.2 Expenses on Peeling and Grading: The reasonableness of the expenses incurred under this head must be verified with reference to the quantum of fish processed. In one of the cases it was found that the assessee had claimed expenses amounting to Rs. 3.72 lakhs on peeling of 14,15,771 kgs of prawns. But on a scrutiny of the books of accounts, the purchase invoices, the landing receipts and other documents it

could be established that only 8,58,519 kg. required peeling. On this basis, corresponding disallowance was made.

4.4.3 Expenses on Ice and Cold Storage: A major portion of the expenses is accounted for by the purchase of ice and renting of cold storage space. The expenses incurred on this count must be cross-verified with the books of account of the ice factory/ owner of the cold storage. Assessees not having ice producing units/ cold storage of their own often try to inflate the expenses by setting up benami units and by doctoring the documents to make it appear as though they purchased ice/ rented cold storage space from the benami units. What happens in such cases is that ice is purchased or cold storage space rented directly from the real owner at a cheaper rate and the benami unit is used as an instrument for inflating purchases. In relevant cases, therefore, the inquiry must be directed towards proving that the ostensible is not the real. Particularly, the reasonableness of the rent paid for cold storage space hired by the assessee must be carefully scrutinized to detect inflation.

4.5 Verification of Sales: Since seafood industry is an export industry, the exports can easily be verified with reference to the data collected from the Customs and Port authorities. As already pointed out, while harvesting shrimps and prawns large quantities of mixed fish are also harvested. The mixed fish may be sold locally or may be converted into fish meal. Similarly, the wastage occurring in shrimps, fish etc. may also be converted into fish meal. It must be verified whether the assessee has accounted for the sale proceeds of such byproducts.

4.6 Applicability of TDS on Payment of Vessel Hiring Charges to NRI.

The applicability of TDS under Section 195 of the Income-tax Act, 1961 on payment of vessel hiring charges to NRI has to be looked into. Reliance is placed on the judgment of the Supreme Court in the case of *M/s Kanchanganga Sea Foods Ltd vs. CIT*, Civil Appeal Nos. 3844–3847 of 2003. The fact of the case is that M/s Kanchanganga Sea Foods Ltd, an Indian Company entered into an agreement with a Hongkong based company chartering two fishing vessels for fishing business. The hiring charge was fixed at maximum US $ 600,000 per vessel per annum payable by way of 85% of gross earnings from fish sales. Minimum of 15% of earnings by way of sales value of catch of fish was required to accrue to the assessee. No TDS was deducted by the assessee on the hiring charge paid to the NRI company under Section 195 of the Act. The ITO, in the instant case, held that the income earned by the NRI company was chargeable to tax under Section 5(2) of the I T Act, 1961. Therefore, the assessee was treated as assessee in default under Section 201(1) of the I T Act, 1961, even though the payment was not made in cash.

The NRI Company went into appeal. However, the DCIT(Appeals) and the ITAT confirmed the order of the ITO. The judgment of the ITAT was also upheld by the Apex Court.

5. AQUA CULTURE AND HATCHERIES

The shrimp aqua culture has witnessed phenomenal growth over the last 20 years with annual production growth rate of around 25%. The total world supply of shrimp has increased owing to the increased efforts, both by way of capture and also by culture. As the growth in supply through capture has stagnated, aqua culture of shrimp has become the major means for augmenting production. India having a coastal area of 6500 km. and about 1.2 million hectares brackish water area has a lot of potential in the area of shrimp aqua culture. Prawns can be cultured both in fresh water, and sea water. In the intensive culture system, about 2500 million seeds are needed for a 5000 hectare area, at the rate of 2.5 lakhs per hectare per crop for two crops in a year. For semi-intensive farming for the same area the requirement is about 1000 million seeds @ 1 lakh per hectare per crop for two crops in a year.

6. SEA WATER SHRIMP HATCHERIES

6.1 History of shrimp hatchery technology dates back to 1930s when Fujinaga of Japan succeeded in rearing early larval stages of Karuma Prawn (Penacuc Japonicus). The first major breakthrough was realised in 1942. Major developments took place in 1960s on key aspects such as food, growth and mass production of shrimp larvae. In the system developed by Fujinaga, the larvae are reared along with their food organisms, but in the Galveston system developed by Cook and Murphy in 1966, larvae are reared separately from live food organisms. Most of the hatcheries, these days combine these two technologies. Major breakthrough on captive maturation, algal culture etc., during 1970s and 80s have contributed to the commercial operation of shrimp hatcheries. Today though hatchery technology is available for 31 species of shrimp, 11 species are propagated commercially. Among these 11 species P. Monodon is considered the most suitable species for culture.

6.2 P. Monodon or the Tiger shrimp has black and yellow bands on its abdominal segments. The males with a length of around 200 mm weigh about 65 gms, while the females of around 240 mm weigh about 90 gms. The adults mature, mate, and release eggs in deep oceanic waters. The hatched out larvae dwell in the surface waters of the ocean till they reach post larvae stage. The post-larval drift towards brackish water areas/ estuaries which are the nursery grounds for them. The grown up shrimps migrate back to offshore waters thus completing the migratory cycle.

6.3 Hatchery operations involve brood stock rearing, maturation (spawning and hatching), larval rearing, post-larval rearing, algal culture, artemia hatching (live brood culture) and sea water management.

6.3.1 Brood stock is collected from wild waters. Minimum size for male and female are 65 to 70 gms and 90 gms respectively having a length of 200 mm and 240 mm respectively. The brood stock is first acclimatized in the hatchery. Therefore, the difference in salinity and temperature between natural sea water and hatchery water should not be more than 5 ppt or 50 cg. In order to achieve best production results the following parameters are maintained:

Table 7

Salinity	--	26–32 ppt
Temperature	--	28–32°C
pH	--	7.8–8.5

6.3.2 In the maturation tanks, filtered and disinfected sea water is filled up. For the spawning tanks and hatching tanks, water is filtered to 1 micron level. Water is changed everyday, and a minimum aeration is also provided. Fresh feed like squid, fish liver, clams, polychaetes shrimps, etc. are used. To avoid bacterial and fungal infection, water is mixed with chemicals and antibiotics. Subdued lighting with the help of fluorescent lights covered with blue acrylic sheets is provided to create the natural habitation for adult shrimps.

6.3.3 Gravid females caught during brood stock collection can spawn naturally. To have greater success rates these gravid females are induced for maturation by unilateral eyestalk ablation.

6.3.4 About 12–13 hours after spawning the fertilized eggs (embryo) hatch out as nauplii (temperature 28–32 °C and salinity 29–34 ppt). The nauplii are harvested and transferred to larval Section within 2 days when they reach the sixth sub-stage i.e. end 6.

6.3.5 The shrimp nauplii received from maturation Section pass through three Zoeal and three Mysis stages before they reach Post-larval stage. Nauplii subsist on yolk. Zoeal feeds on phytoplankton (Unicellular Algae) and Mysis larvae feed on phytoplankton and zooplankton (microscopic animals). Post-larvae feed on zooplankton. Any deficiency in nutrients is met by inducing the live feed cultures and by continuous aeration.

6.3.6 Only aquatic grade drugs which are soluble in water are used. All the drugs are dissolved in distilled water or in potable fresh water and administered near aeration points for thorough mixing. Photo degradable drugs are given at night time. Usually all drugs are given immediately after water exchange and feeding.

6.3.7 From the post-larval stage, the larvae are designated by the age in terms of number of days. The post larval rearing includes rearing from three day old, till 20 day post-larva. (The viability of a hatchery depends much on the cost of production of post-larval). The post-larval are stocked @ 25–250/ litres and reared till harvest. Post-larval are fed with mainly artemia and prepared egg feed @ 2 to 5 ml, two to three times a day. Algae need not be fed for post larvae. Antibiotics and chemicals are used for therapeutic/ prophylactic treatment. Post larvae are harvested at PL-20 stage or 13 mm in size which is ready to be stocked in grown up ponds. 50% survival can be normally accepted from post-larvae rearing.

6.3.8 Pathogens i.e. disease-causing organisms affecting production, generally come from two sources, *viz.* water and mother prawns. Pathogens coming through water are generally kept under control by maintaining good water quality; and those coming through mother prawns are generally avoided. Hence water management and quality brooder selection plays a major role in production of shrimp seeds. Normally to ensure quality, seed production hatcheries observe 15 days of shutdown operation once in 45 days of production. Usually marketing of shrimp seed is dull during the months October to December. During this period hatcheries observe annual shutdown and undertake maintenance works.

7. FRESH WATER HATCHERIES

7.1 According to FAO nomenclature fresh water paleomonids are referred to as 'prawn". Fresh water prawns of the genus, Macro brachium are distributed throughout the tropical and subtropical regions of the world. There are 150 species of macro brachium in the world, of which 49 are commercial. 25 of the commercial species are found in Indian waters. Most of them live in fresh water. A few species live in brackish water at the mouth of rivers. Among different species available macro brachium rosembergii is the best species of aqua culture, since it can be grown in both fresh and low saline water. It has mixed growth potential among culture prawns. It has no serious problems of disease and has a good consumer preference and demand in local sales/ export markets. In the early 50s Thai farmers started rearing fresh water prawns by collecting the seeds from natural waters. In 1961, a Taiwanese Scientist Dr. S.W. Ling, discovered that Mrosenbergii, though actually an inhabitant of fresh water, completed its larvae phase in brackish water. Following this discovery, Dr. Ling reared the larvae in brackish water and achieved success in 1962. Following Ling's success attempts at artificial seed production were made in India during 1963–65 by Rao at CIFRI and also the Department of Fisheries of Kerala. The experiments conducted at the Fisheries College, Cochin since 1987 resulted in a cost effective technology using suspended particles of shrimp/ clam meat with egg as the major feed.

7.2 There are four stages in the life of a freshwater prawn *viz.*, egg, larva juvenile and adult. In the natural environment, mating of Macro brachium takes place all year round, although, due to environmental reasons, peak mating takes place only during certain periods of the year. A fully mature female of 50–100g can carry 50,000–100,000 eggs. But at first maturity, due to the female's small size, it lays only 5000–20,000 eggs. In the laboratory, it has been observed that hatching takes place 20 days after copulation; it may even take 25–30 days if the temperature has remained below 28 degrees C. In some case, a female can lay eggs twice a month. Larvae hatch during the night. Larvae in

a hatchery take 26 days to metamorphose into post-larvae (PL).

7.3 Macro brachium larvae cannot collect food directly by themselves. Live Artemia salina nauplii (Brine Shrimp Nauplii, BSN), a small crustacean rich in protein and essential fatty acids, is given as feed to prawn larvae. No commercially effective substitute has yet been found for Artemia nauplii. This is the major operating expense of a freshwater prawn hatchery.

7.4 The known diseases of Macrobrachium rosenbergii larvae are, caused by bacteria, protozoa and nutritional deficiencies, Mid-cycle larvae Disease (MCD). Bacterial Necrosis (RN). Exuvia Entrapment Disease (EED). Microscopic Epibiont Disease (MED). Usually, 90% of postlarvae are obtained before day 42. However, usually harvesting is done between day 30 to 35 (60–80% of post-larvae) for economic reasons. When post-larvae density on the bottom of tank is above 2/sq.cm. (100,000/2-m' tank), some cannibalism may occur. Therefore, post-larvae must be cropped before this stage.

7.5 The main differences between sea water prawns and fresh water prawns are as under:

Table 8

Sea Water Prawns	Fresh Water Prawns
The land near sea can be used by using sea water as ponds for prawn cultivation	Land nearby river can be used by using fresh water for prawn cultivation.
Availability of land and water plenty	Even though the availability of land and water is plenty it costs more.
Diseases found to be more and survival rate is less than 50%.	Diseases found to be less and the survival rate is more than 50%.
Commercially very good and profit margin is more.	Not so economical/ commercial and the profit margin is not high.
Already established business	This line of business is recently started and, is still developing

8. EXAMINATION OF ACCOUNTS

8.1 Capital Cost of Shrimp Hatchery

8.1.1 The capital cost involved in starting a hatchery is one of the major factors that decide the cost of the end product. If the capital cost increases abnormally, then because of allowance of proportionate depreciation the taxable income also comes down. Hence the AO should be vigilant regarding the cost of various fixed assets also. An illustration of "per hectare cost", on estimate basis" is as under:

8.1.2 An Overview: How Much Does it Cost to Start Prawn Farming in a Hectare?

In prawn farming, feeding, digging, and equipment are the main sources of investment. The capital investment amount also depends on the amount of seed you are going to farm. On an average, the investment can be anywhere from 7 to 12 lakh that include seed, feed, equipment, and medicines. The farmer should have equipment such as water aerator sets, pumps, and generator that is mandatory in this culture. To reduce the capital investment, some farmers get this equipment for lease/ rent. It takes about 4 to 5 lakhs to dig and prepare a hectare pond. An already built prawn pond may help you in capital investment. The main risk factor in prawn farming is a virus and WSD, proper pond maintenance and medicine availability is very important. On a successful crop, at the time of harvest, a farmer can make profits twice or thrice on the investment. The sale price of the harvest is based on the number of prawns per kilogram, the lesser the count, more is the selling price. Depending on the current market rate, on an average with a count of 40 per kg, a farmer can make about 13 to 15 lakh per crop.

A. Fixed Capital Investment Cost on Hatchery

Table 9

Sl. No	Particulars	Cost. Rs.
1.	Broodstock Pond 2. Nos	1,08,000/
2.	Larva Rearing Tank 12. Nos	1,15,000/
3.	Hatchery Shed 10x6 m	2,35,000/
4.	Water Storage Tank	46,000/
5.	PVC Drainage Piping	21,000/
6.	Aerator Set 5hp, 2. Nos	1.50,000/
7.	Water Pump sets 2 hp, 2. Nos	30,000/
8.	Generator 5 kva	65,000/
9.	Electrical Installation	25,000/
10.	Borewell	45,000/
Total Fixed Capital Investment		8,40,000/-

A1. Total Operational Investment

Table 10

S. No	Particulars	Cost. Rs
1.	Chemical and Organic Fertilizer	7,500/-
2.	Broodstock Development	50,000/-
3.	Pumping and Aeration Charges	15,000/-
4.	Pelleted Feed and Artemia @ Rs.4000/kg	2,20,000/-
5.	Seawater Transportation	27,500/-
6.	Fuel and Electricity	35,000/-
7.	Refrigerator	25,000/-
8.	Salaries and Wages	1,90,000/-
9.	Miscellaneous	30,000/-
Total Operational Investment		6,00,000/-

A2. Total Cost of Hatchery

Table 11

S. No	Particulars	Cost.Rs
1.	Operational Cost (A)	6,00,000/-
2.	Depreciation on Fixed Cost @ 10%/ year (A1)	84,000/-
3.	Interest on Fixed Investment @ 15%/ year (A1)	1,26,000/-
Total Cost		8,10,000/-

A3. Income on Hatchery

Table 12

Sl. No.	Particulars	Cost Rs.
1.	Sale of Seed @ Rs. 500/1000**	10,00,000/-
Net Income (Sale–Total Cost) (Net of A2)		1,90,000/-

**Sale price is per thousand seeds (PLs)

B. Operational Cost of Freshwater Prawn Farming in Semi-Intensive Culture

Table 13

S. No	Particulars	Cost. Rs
1.	Chemical and Organic Fertilizer	7,500/-
2.	Prawn Seed 30,000/ ha @ Rs. 600 per 1000	18,000/-
3.	Formulated Pellet Feed	40,000/-
4.	Laborer wages per annum	57,600/-
5.	Laborer wages at Harvesting	6,000/-
6.	Fuel and Electricity	3,500/-
7.	Miscellaneous	5,000/-
Total Operational Investment		1,37,600/-

B1. Total Cost on Freshwater Prawn Farming

Table 14

S. No	Particulars	Cost. Rs
1.	Operational Cost	1,37,600/-
2.	Depreciation on Fixed Cost @ 10%/ year-(B)	13,760/-
3.	interest on Fixed Investment @ 15%/ year (B)	20,640/-
Total Cost		1,72,000/-

B2. Income on Freshwater Prawn Farming

Table 15

S. No	Particulars	Cost. Rs
1.	Sale of Big Size Prawn 450 kg (5) Rs. 550/kg	2,47,500/-
2.	Sale of Small Size Prawn 90 kg (5) Rs. 200/kg	18,000/-
Net Income (Total Sale-Total Cost) (Net of B1)		93,500/-

Source: https://www.agrifarming.in/prawn-farming-project-report-cost-profits-guide

8.2 Cost of Brooder Mother Prawns: The availability of gravids (brooders/ mother prawns) during peak season is a limiting factor for the availability of nauplii for larval stocking. The cost of brooder (mother prawn) has to be gathered from local market, depending upon the availability of catch and the climatic conditions. The hatchery owner has to take several precautions right from the time of purchase/ brooder stock upto the hatching point. These include maintenance of temperature during transit, from coastal belt to the hatchery. If these precautions are not taken, the brooder (mother prawn) will lay eggs in a limited place, which may not be helpful in using these for hatching purpose. If the brooder lays eggs before reaching the hatchery, the cost of brooder will be almost zero, and it can be used only for consumption purposes. Some times the cost of brooder goes upto Rs. 40,000 to Rs. 70,000 per gravid, but they are often available from Rs. 1,000 per gravid onwards. The AO should be vigilant in this regard, and should gather information from the local market regarding the rates of brooder.

8.3 Cost of Feed: As regards the expenditure on feed, chemicals and medicine, the AO has to investigate the genuineness of the purchases from the distributors/ suppliers. The reasonableness of consumption can be checked from the guidelines provided in the brochures of MPEDA i.e. Marine Products Export Development Authority, Ministry of Commerce, which are as under:

Table 16

ARTEMIA FEEDING SCHEDULE for P.L. stage	
PL 3 to PL 6	2 ml x 3 feeds a day
PL 7 to PL 12	3 ml x 3 feeds a day
PL 13 to PL 20 3 ml x 1 feed a day	

Table 17

EGGS FEEDING SCHEDULE for P.L. period	
PL 8 to PL 10	15 gms x 2 times a day
PL 11 to PL 15	25 gms x 2 times a day
PL 16 to PL 20	40 gms x 5 times a day

N.B.: *Usually, the "size" of post-larvae (PL) in the market is considered their chronological age after completing the metamorphosis period. A P.L.10, for example, is an animal that went through complete metamorphosis (involving nauplii, zoea and mysis stages) and has been a post-larva for 10 days. At this point, the animal has completed its morphological and physiological development, and the standard larval-rearing process would be finished.*

As feed forms one of the major inputs, the cost of inputs can be verified on the basis of the above calculations. While accepting the expenditure towards feed, the AO should invariably verify the consumption of feed with reference to the number of survivals. The availability of good hatchout artemia becomes a constraint during peak seasons of hatcheries production. As of today the artemia available for shrimp hatcheries, is imported mostly from Great Salt Lake, Utah, USA. For an optimal hatchery cycle, the consumption of 15 kg per million tiger shrimp seed of artemia, is considered to be economical.

8.4 Cost of Medicines and Chemicals: The expenditure booked towards chemicals and medicines should be linked with the production and sale of PL 20. The GST on these items is @ 5–12% at present. If necessary, the Assessing Officer, can obtain information from GST Department with regard to the monthly GST returns filed by the hatcheries, and also from the distributors/ suppliers of medicine/ chemicals. Because of checks by GST department, the tendency to suppress the cost of production with regard to chemicals and medicine arises. To offset suppression of cost of production, the hatcheries are likely to suppress the sales both quantitatively and rate-wise. As the clientele of the hatcheries are mostly shrimp farmers, it is difficult to detect the suppression of sale at a later date. In turn the shrimp farmers sell their end products to the Export Houses or route the same through Exporters, who would like to show their cost of production at a lesser rate, so as to show larger profits from exports, which are exempt

from taxes. To check this tendency proper and intermittent checks are needed during the course of production of PL 20, as regard the cost of various inputs and the sale price of the end products.

8.5 Comparative Sale Price: The sale price varies on weekly basis depending on the month of the year, type of prawn, quality, size etc. The AO needs to be vigilant regarding the market ups and downs. The rates of one hatchery can be compared with the rates of other hatcheries. Further, the hatcheries usually shut down 15 days once every 45 days of production. Besides, hatcheries also shut down between October and December. The AO can check whether any expenditure on the feed, medicine, cost of PL 20 etc. has been debited during the shutdown periods.

8.6 Survival Rate of PL 20: Estimation of population at different larval stage is done by random sampling. These estimates are not accurate. However, for all practical purposes the survival in sea water is less than 50% and in fresh water the survival is more than 50% from the initial to the final stages of the larva.

9. CORPORATE SCENARIO

9.1 Export of seafood is in the hands of a few corporate and non-corporate entities. These entities, own fishing vessels and harvest marine products. However, large part of the export is from out of the purchases made by them from artisanal fisherman. The purchases are made to some extent directly from the fishermen. Some of the middlemen have their own arrangements for getting product processed and block frozen. The smaller entrepreneurs get their product processed and frozen on hire at other factories.

9.2 The big corporate entities in seafood industry follows the standard operating procedure (SOP) to purchase of raw material to ensure proper check and balance while affecting the purchases. The exporter appoints purchase man at various fishing markets in Port area to purchase the raw material. Purchase man takes the telephonic confirmation from Managing Director or Production Manager with regard to rate/ variety/ quality at the time of purchasing of catches of fisherman and afterwards, purchased material is loaded to trolley and weight of the quantity is measured at the weighbridge located at fishing market. The purchase man and trolley-man prepare the delivery challan and duly sign it specifying the rate, quantity, quality and port details etc. Thereafter, raw material is dispatched to cutting centre for head cutting and weighing of headless fish. In order to verify the authenticity of raw material delivered vis-a-vis details specified in the delivery challans i.e. rate./ quantity/ quality, number of check points are installed at the premises of manufacturing unit. Firstly, the gatekeeper checks the weight as specified in delivery challan at the time of entry of loaded trolley/ truck and makes the necessary entries in the goods receipt register or inward register and subsequently, specifications mentioned in the delivery chalian are verified and duly certified by the production manager or managing director of the assessee company. Further, delivery challan is forwarded to the account Section for preparation of purchase invoice and after verification of delivery challan and purchase invoice by the Managing Director, the account Section is informed to release of payment to the part as per pre-decided terms and conditions.

9.3 Generally, above described standard operating procedure is not followed while debiting fictitious invoices without physical delivery of material from paper concerns. Delivery challans of raw material shown to be purchased from bogus entities to inflate the expenses prepared at factory premises mostly in account Section unlike to delivery challans of genuine entities. These delivery challans will be either unsigned cr signed by the unauthorized persons. It is very essential to take the month-

wise list of purchase man appointed by assessee at various fishing markets to ascertain the sanctity and genuineness of delivery challans. From the point of view of investigation, it is very significant to ascertain as to whether specifications like rate/ quantity/ quality are mentioned in that bogus delivery challans and if mentioned, then whether these are showing correct and realistic picture of that day prevailing market conditions like rate, availability of particular quality etc. Statistical data on the quantum of fish landed, collected by the Central Marine Fisheries Research Institute is useful. The institute has divided entire Indian Coast into Zones, of about 20–30 landing centres. From each Zone, a trained staff collects information of the fish landings, gears employed, effort expended and data on size, weight and maturity conditions of the major commercial species, price structure etc. These suspicious delivery challans may be correlated with goods receipt register or inward register to ascertain as to whether raw material shown to be delivered as per these delivery challans, is genuinely entered into the inward register on same date and duly signed by authorized person or not The verification of bank account statements of these suspicious parties may lead to ascertain the genuineness of business operation of these parties. Immediate credit and debit transactions (cash withdrawal or RTGS/ NEFT to other bank accounts) with zero balance indicate suspicious nature of activities.

9.4 Case Study: In one case the assessee had formed paper concerns in the name of his employees and had shown bogus purchases from these fictitious concerns. These non-genuine purchases were without proper documentation and SOP of purchases was not followed. The delivery challans were prepared at the factory premises in the account Section. These delivery challans were either unsigned or signed by unidentified persons. Thereafter, bank account statements of these bogus concerns were verified and it was observed that huge credit transactions taking place in these bank accounts through RTGS/ NEFT/ CHEQUE from assessee's bank account and immediately followed by cash withdrawals. The bank account holders were not aware about the nature of transactions in the bank accounts and in fact, these bank accounts were operated by key persons of assessee. The conventional payment pattern was not followed while making payment to these concerns. The payment was transferred to the bogus concern in advance or immediately after affecting purchases in round figure, however, in the case of genuine parties (middlemen), payment was transferred within 45–60 days after delivery of raw material. With the help of stepwise verification of SOP, it was conclusively proved that, the assessee has not received actual physical delivery of raw material from certain parties and fictitious purchase were debited to inflate the expenses and consequently, to suppress the profit. As stated above and alternatively the same are also reflected as Trade Advances in the Balance Sheet of the company and in many cases subsequently written off as bad debts after a gap of even nineteen years on the plea that no purchases were effected from such fishermen not only due to the vagaries of nature or rough sea resulting in non traceability/ death of fishermen but also fishermen landing into enemy territory and being caught and jailed. Even the contact person are also not available for pursuing the matter due to various reasons such as death and hence they have no option but to write-off the trade advances as irrecoverable or as a loss arising out of business. The courts of the country also take a liberal view in the matter considering interaction, the very nature of uncertainties associated with sea food and marine industries. However, no concrete evidence could be put forth by the assessee company before the Investigating/ Assessing Officer regarding details of such trade advances except for writing off the same in the books of account subsequently and claiming the same as a loss/ bad debt deduction.

10. CASE LAWS

10.1 *Torry Harris Sea Foods (P.) Ltd. vs. Assistant Commissioner of Income-tax, Circle-1, Alappuzha;* (2018) 97 taxmann.com 443 (Cochin-Trib.) Section 92C of the Income-tax Act, 1961 – Transfer pricing – Computation of arm's length price (Comparables and adjustment/ Comparables – Illustrations) – Assessment Year 2012–13 – Assessee in its Transfer Pricing study had concluded that CUP was most appropriate method for benchmarking international transactions in seafood industry and had used export rates published by MPEDA i.e. Marine Products Export Development Authority, as a comparable in its CUP analysis and claimed 3 per cent adjustment for difference in glaze in each sale made to its AE so as to bring it under Arm's Length Price – TPO rejected adjustment as claimed by assessee and made adjustment after examining invoice produced by assessee showing that it had exported products having glazes ranging from 15 per cent to 25 per cent-It was found that assessee's products as such could be compared with price list published by MPEDA which was for 20 per cent glaze after making suitable adjustment which TPO had done-Further, assessee had not brought on record any evidence to show that assessee's product was having 25 per cent glazes so that it could not be compared with price list published by MPEDA – Whether therefore, claim of assessee was to be dismissed – Held, yes.

10.2 *Commissioner of Income-tax vs. Premier Export International;* (2004) 134 Taxmann 339 (Kerala) in IT Reference No. 163 of 1999 dated November 7, 2003-Section 32A of the Income-tax Act, 1961 Investment allowance – Assessment Year 1985-86 – Assessee was exporting prawns and shrimps after subjecting them to various treatments-Whether when raw prawns are subjected to process of deveining and peeling, they do not cease to be prawns and become other distinguished commodity Held, Yes-Whether, therefore, assessee was not entitled to investment allowance under Section 32A – Held, yes.

11. CONCLUSION

The AO may note that the purchases in this industry is mostly through auctions and are usually made from the boats arriving from sea. The lot may include unwanted sea weed and other sea creatures, shells etc. The assessee may claim wastage at proportionately higher rate which is one of the modus operandi for tax evasion i.e. showing low yield. Secondly, the large players stock their processed seafood in cold storages temperature in which is maintained at 18–20°C. Taking physical stock inventory during search or survey operations is not a viable option. The AO should device a different strategy to ascertain the actual stock.

CHAPTER

15

Soft Drink Industry

1. THE SCENARIO

1.1 In India, the youth, especially those from the well to do Sections, patronise the soft drinks segment. Revenue in the **Soft Drinks** segment amounts to US$ 4324m in 2019. The market is expected to grow annually by 8.1% (CAGR 2019–2023). There is stiff competition in the industry. The cola war is on. No programme in the electronic media can be seen without the advertisement of one soft drink or the other being splashed across in the commercial breaks. If one particular drink says it is 'being liked by the hearts asking for more', another proclaims 'if you enjoy it, whatever you want, can happen- 'One advises you not to go by the looks, but to go by the taste. The other claims that 'you have to grow up, to like it'. Thus, there are advertisements galore for one soft drink or the other. The market is huge and each competitor wants to reach out to as many customers as it can.

1.2 The soft drinks industry in India can be broadly bifurcated into two segments, (a) aerated (carbonated) soft drinks & (b) non-aerated (non-carbonated) soft drinks. Understandably the aerated (carbonated) drinks segment is dominated by two MNCs, namely Pepsi & Coca Cola. The market share of these two companies, put together, is estimated at 95%. In 2019, the segment-wise revenue of carbonated and non-carbonated soft drinks is US$ 279m and US$ 4,045m respectively. There are few others in organized sector but at regional levels. Apart from the foregoing, there are local manufacturers with lesser known varieties in the unorganized sector. A few graphical representations of data relating to soft drinks in World/ India are as under. The source is STATISTA (Website).

Fig. 1: Global

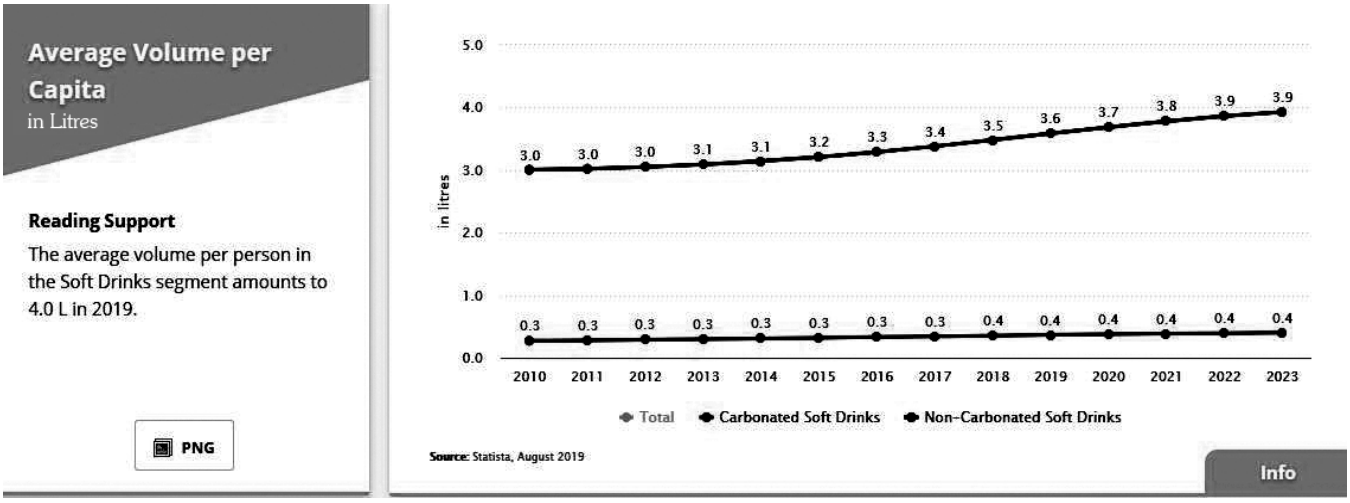

Average Volume per Capita
in Litres
Reading Support
The average volume per person in the Soft Drinks segment amounts to 4.0 L in 2019.
PNG
in litres
5.0
4.0
3.0
2.0
1.0
0.0
3.0 3.0 3.0 3.1 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 3.9
0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
Total
Carbonated Soft Drinks
Non-Carbonated Soft Drinks
Source: Statista, August 2019
Info

Fig. 2: India

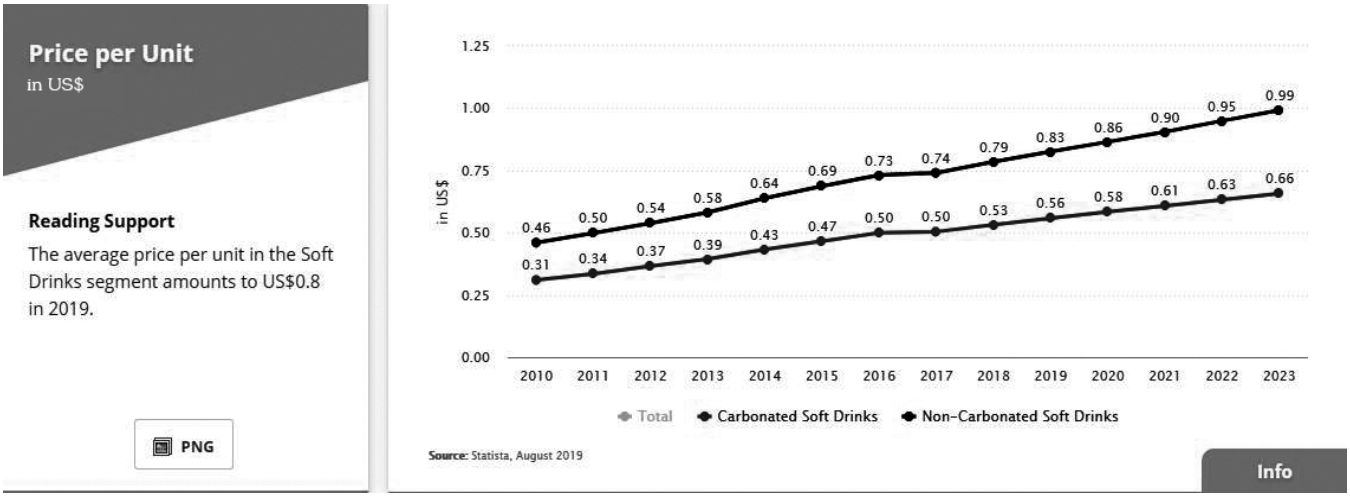


Fig. 3: India

The projections of soft drink industry in India, in graphical form, are as under:

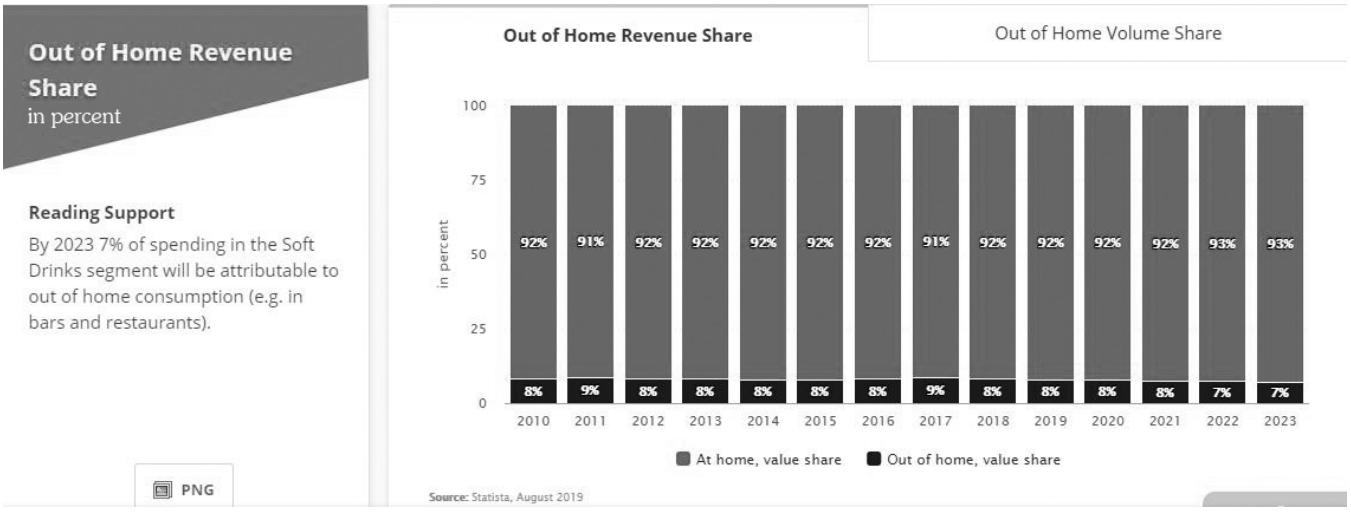

Out of Home Revenue Share
in percent
Reading Support
By 2023 7% of spending in the Soft Drinks segment will be attributable to out of home consumption (e.g. in bars and restaurants).
PNG
Out of Home Revenue Share
Out of Home Volume Share
in percent
100
75
50
25
0
92% 91% 92% 92% 92% 92% 92% 91% 92% 92% 92% 92% 93% 93%
8% 9% 8% 8% 8% 8% 8% 9% 8% 8% 8% 8% 7% 7%
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
At home, value share
Out of home, value share
Source: Statista, August 2019

Fig. 4

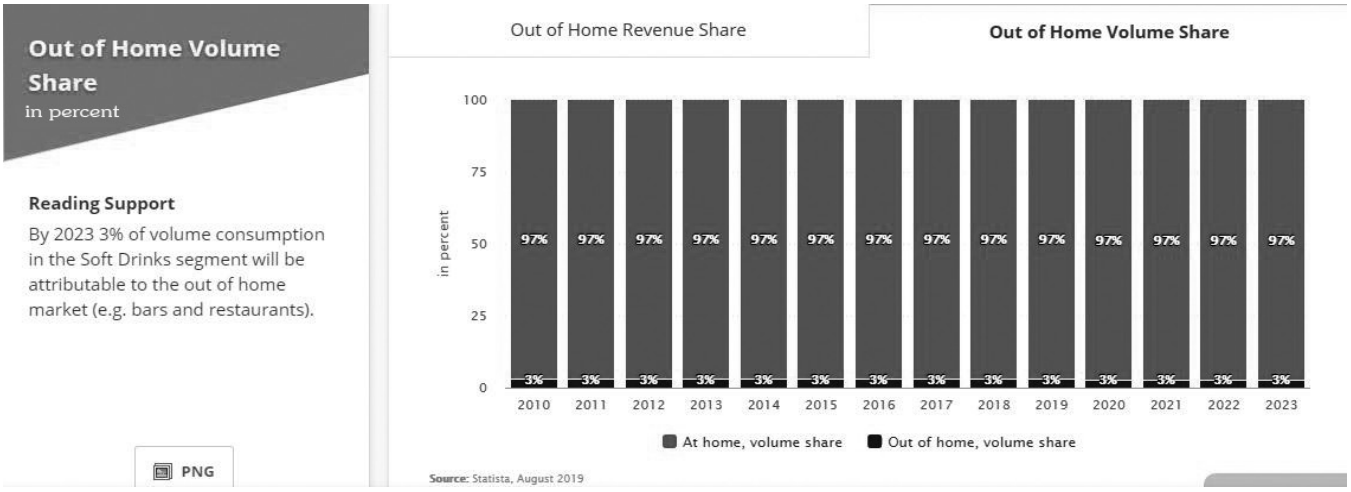

Out of Home Volume Share
in percent
Reading Support
By 2023 3% of volume consumption in the Soft Drinks segment will be attributable to the out of home market (e.g. bars and restaurants).
PNG
Out of Home Revenue Share
Out of Home Volume Share
in percent
100
75
50
25
0
97% 97% 97% 97% 97% 97% 97% 97% 97% 97% 97% 97% 97% 97%
3% 3% 3% 3% 3% 3% 3% 3% 3% 3% 3% 3% 3% 3%
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023
At home, volume share
Out of home, volume share
Source: Statista, August 2019

Fig. 5

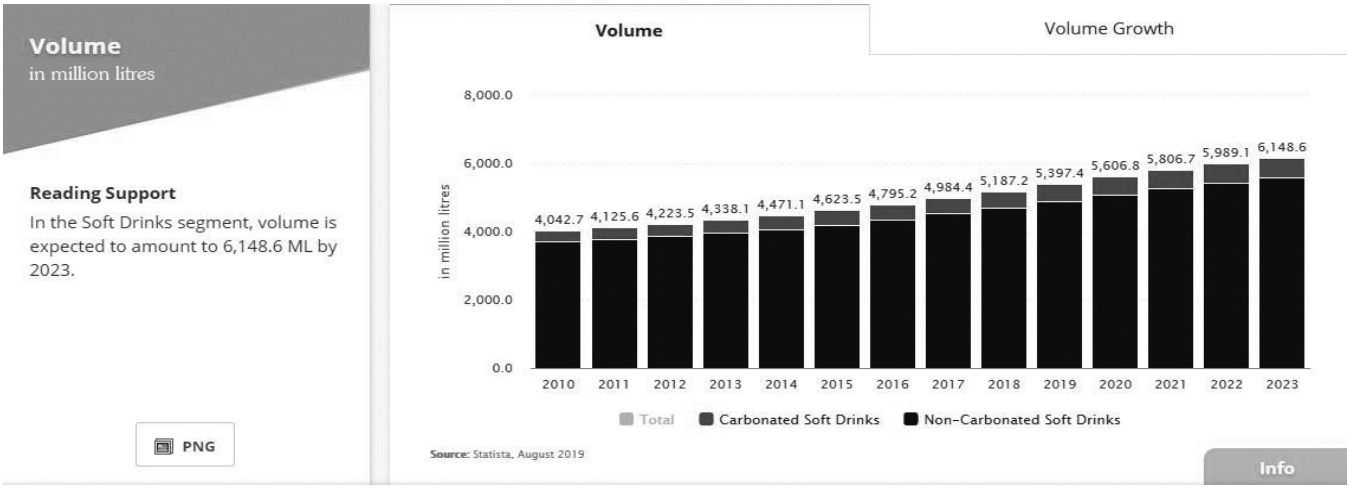


Fig. 6

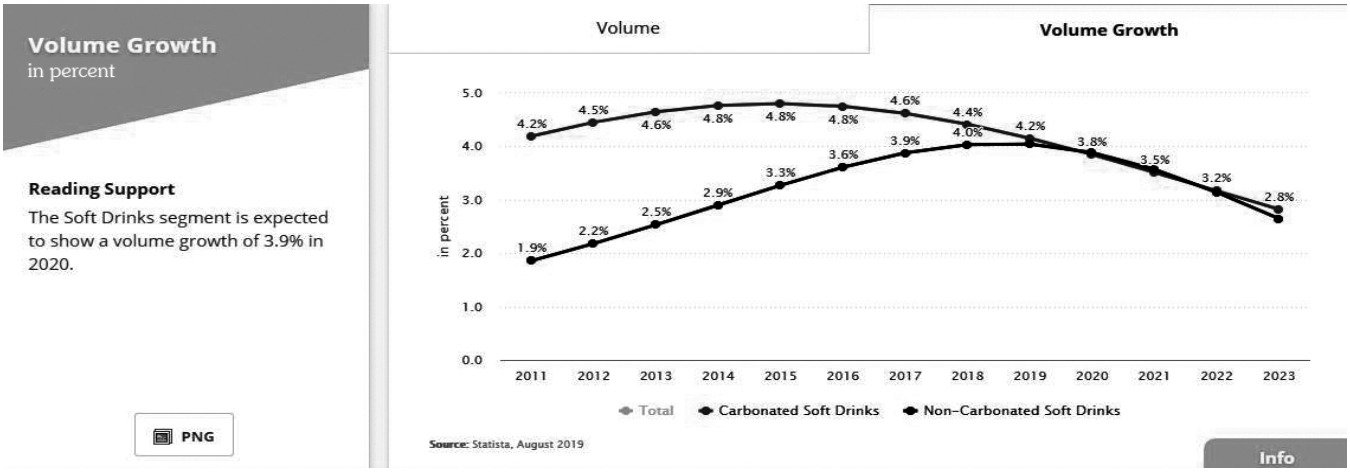


Fig. 7

1.3 From the foregoing paras, it can be seen that non-carbonated soft drinks are more popular in India as compared to carbonated drinks. A few statistical data in respect of non-carbonated industry in India are as under, in the form of graphical representation:

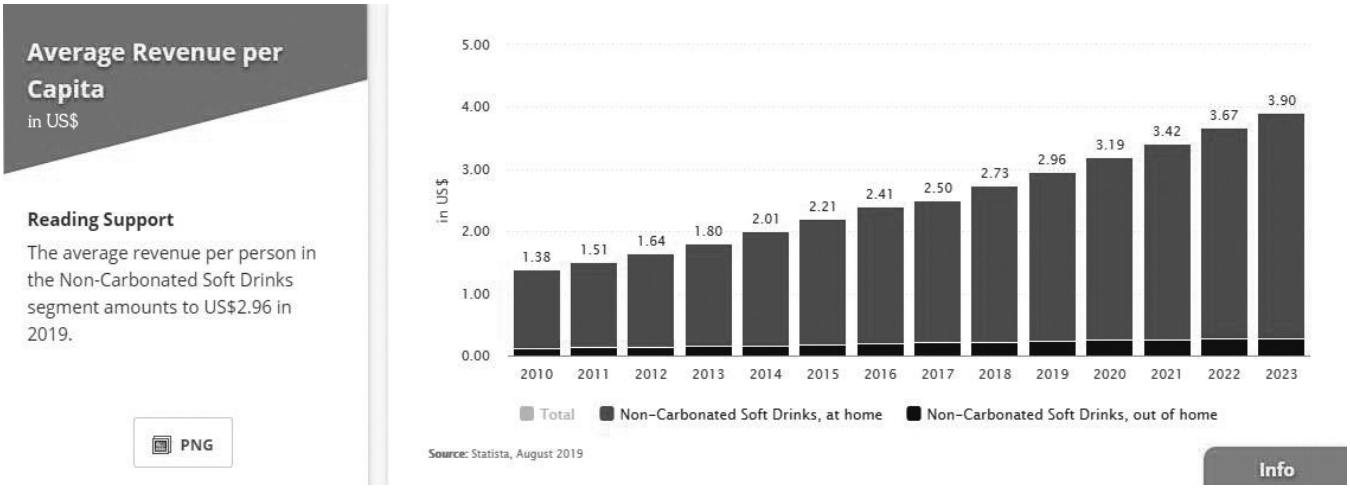

Average Revenue per Capita
in US$
Reading Support
The average revenue per person in the Non-Carbonated Soft Drinks segment amounts to US$2.96 in 2019.
PNG
in US$
Total
Non-Carbonated Soft Drinks, at home
Non-Carbonated Soft Drinks, out of home
Source: Statista, August 2019
Info

Fig. 8

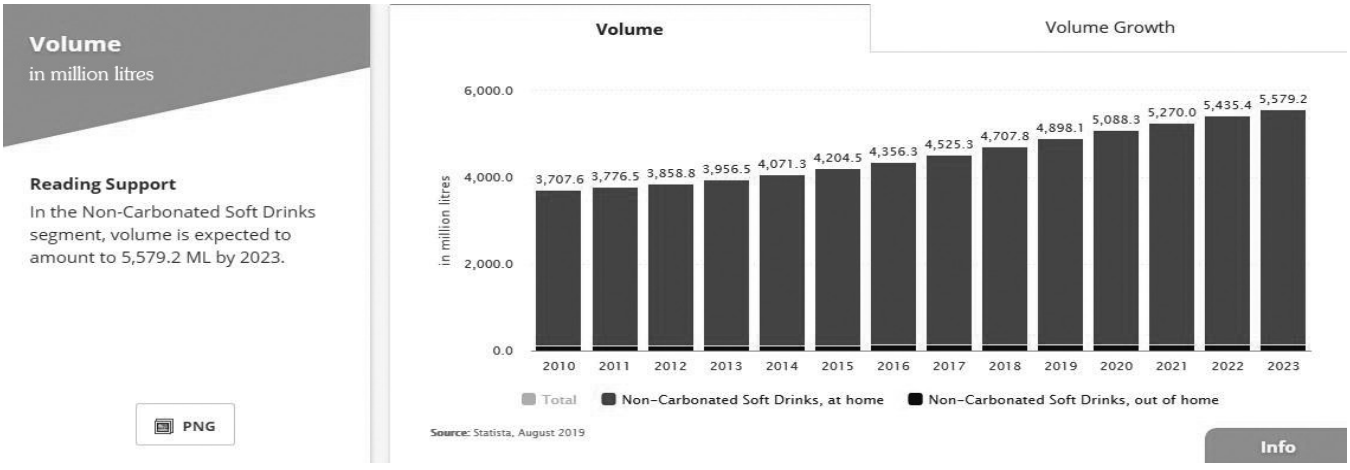


Fig. 9

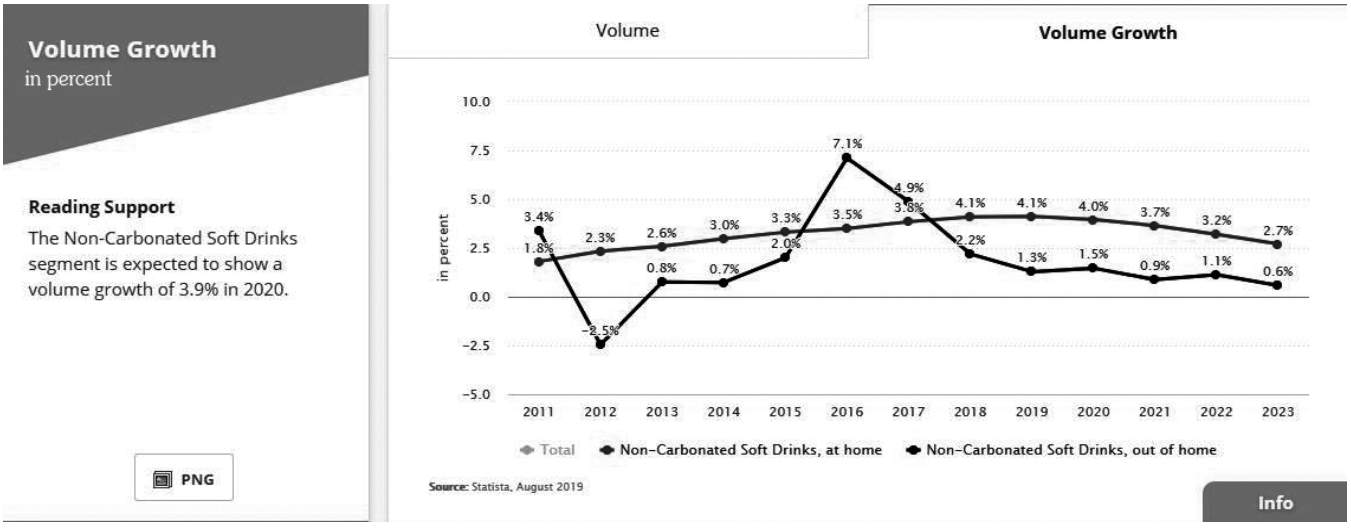


Fig. 10

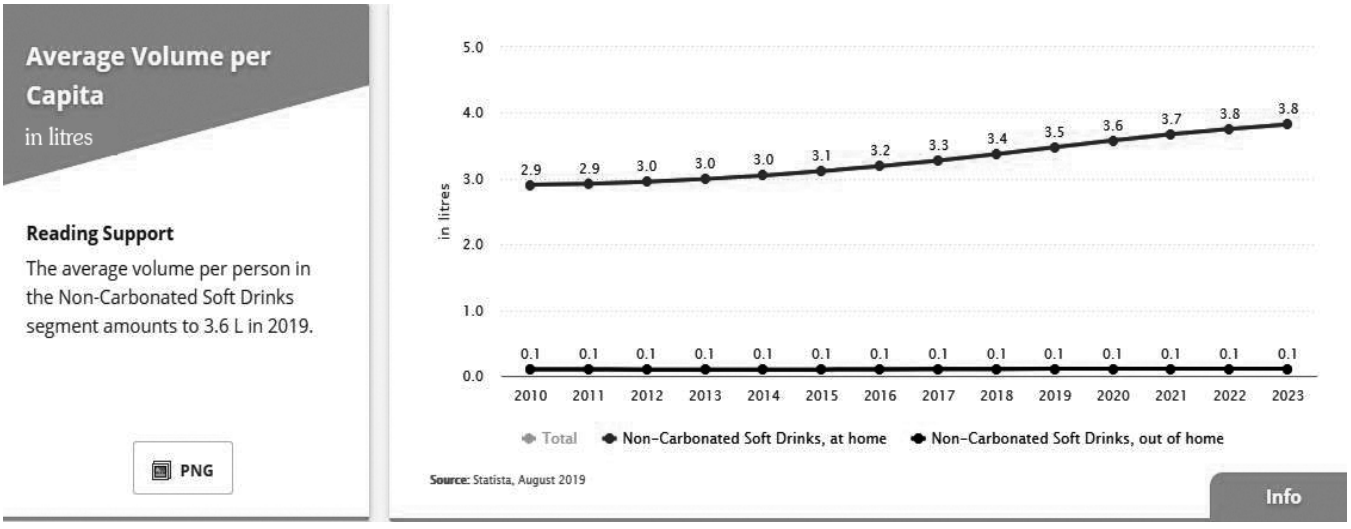

Average Volume per Capita
in litres
Reading Support
The average volume per person in the Non-Carbonated Soft Drinks segment amounts to 3.6 L in 2019.
PNG
in litres
Total
Non-Carbonated Soft Drinks, at home
Non-Carbonated Soft Drinks, out of home
Source: Statista, August 2019
Info

Fig. 11

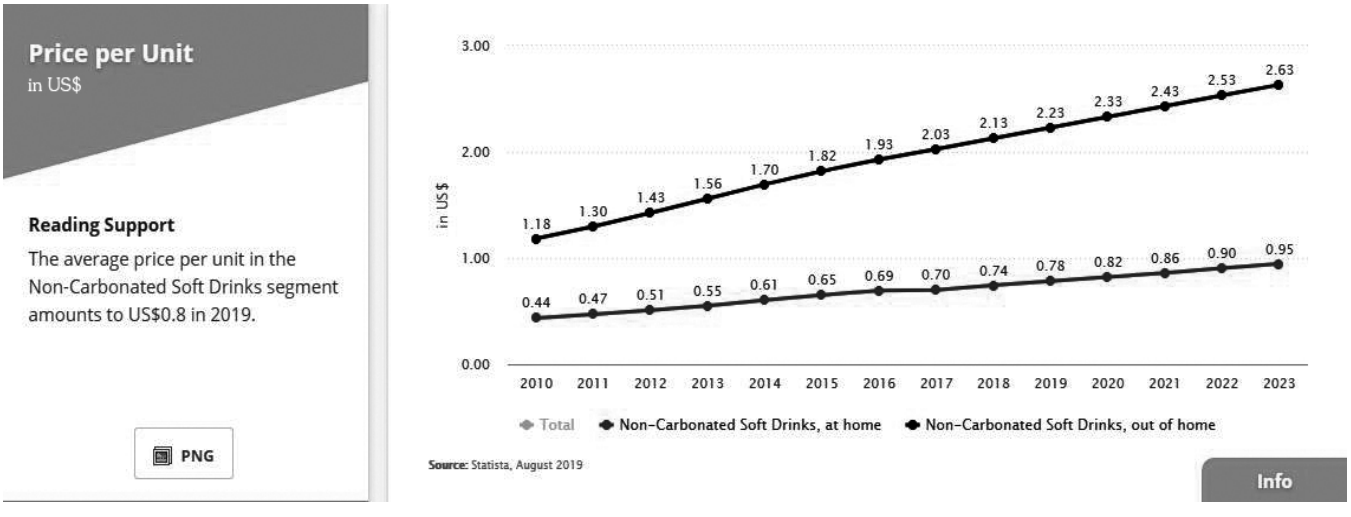


Fig. 12

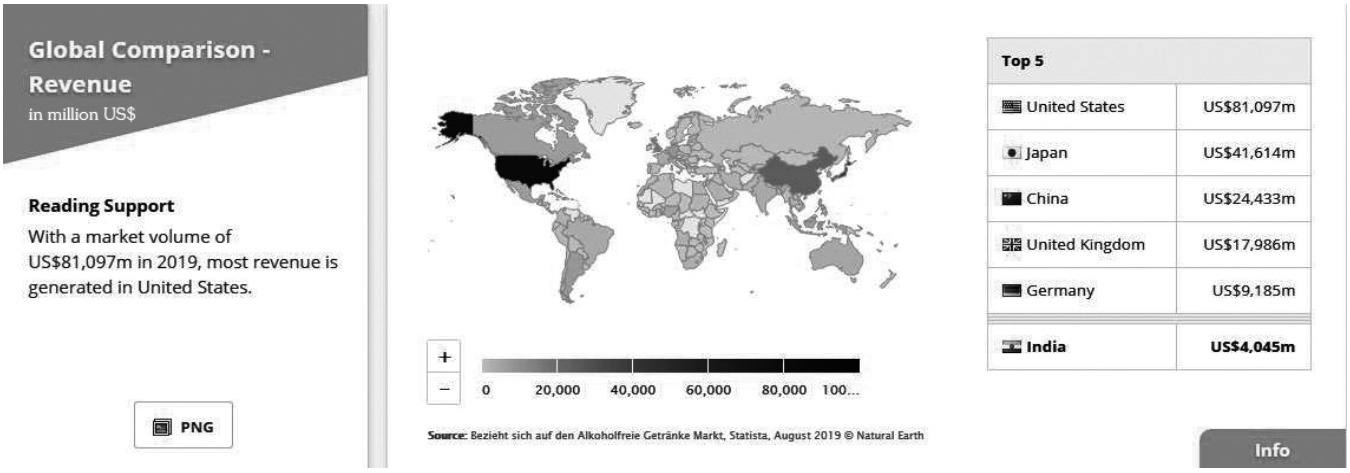


Fig. 13

1.4 A comparative study of data of carbonated soft drinks and non-carbonated soft drinks in India is as under:

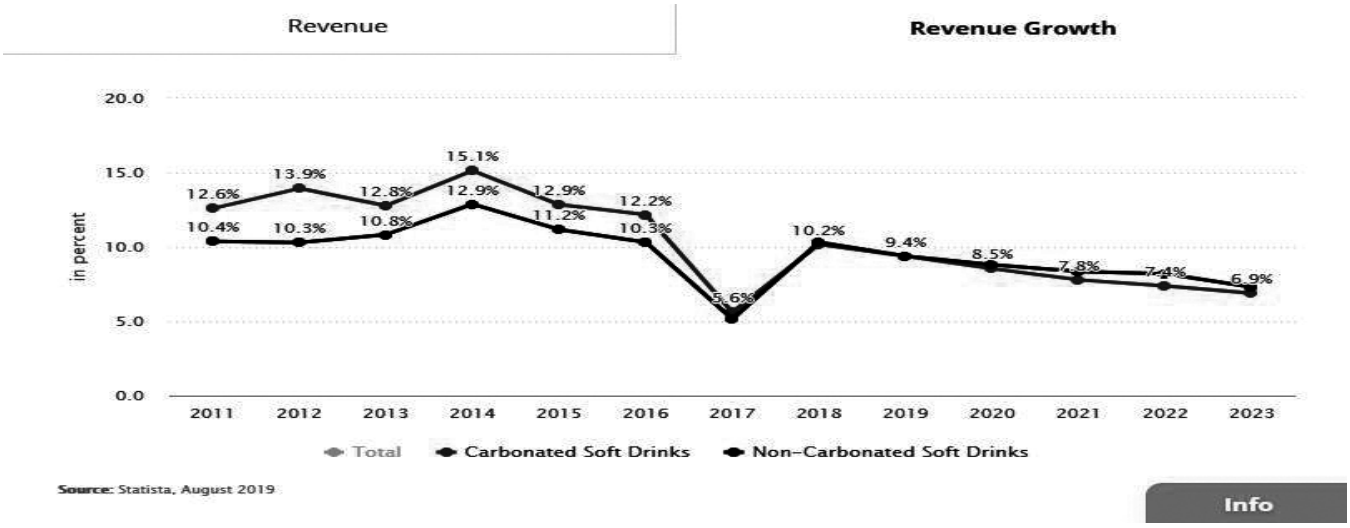


Fig. 14

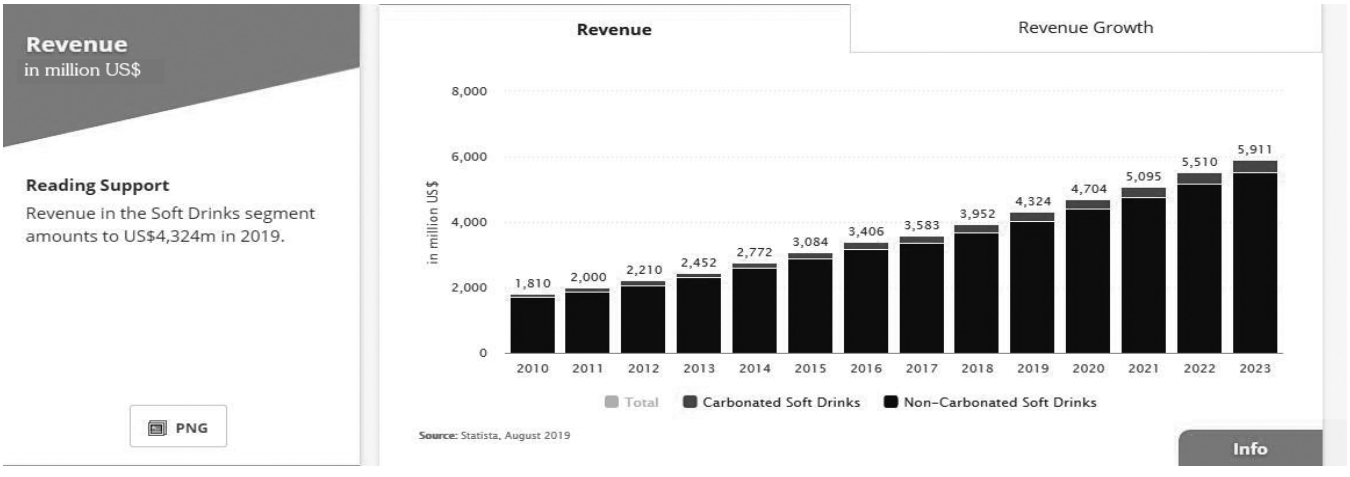


Fig. 15

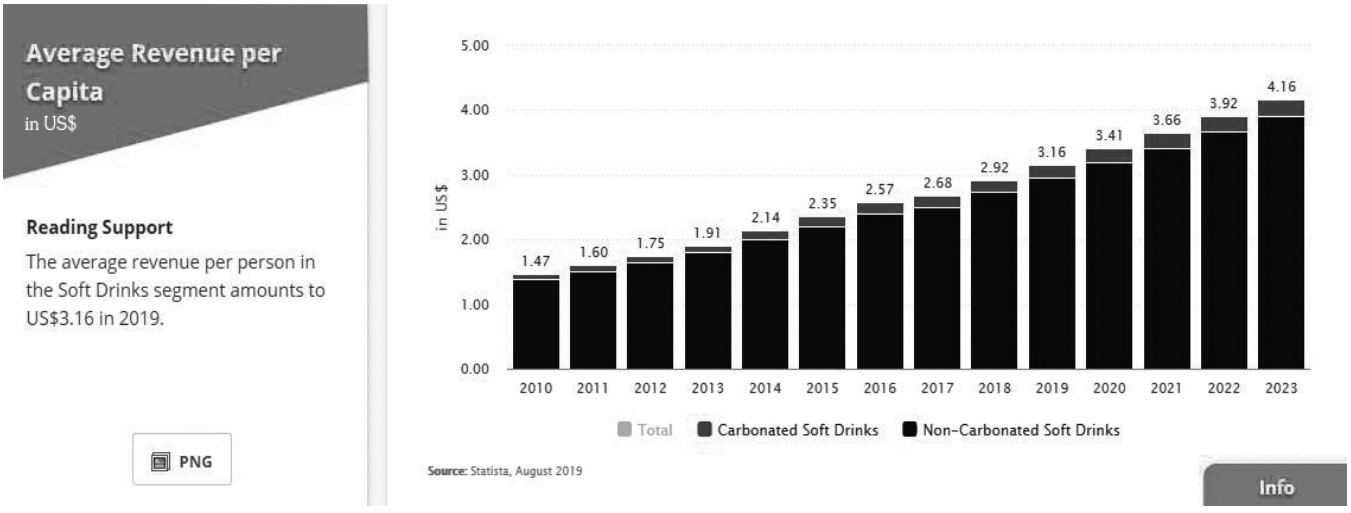


Fig. 16

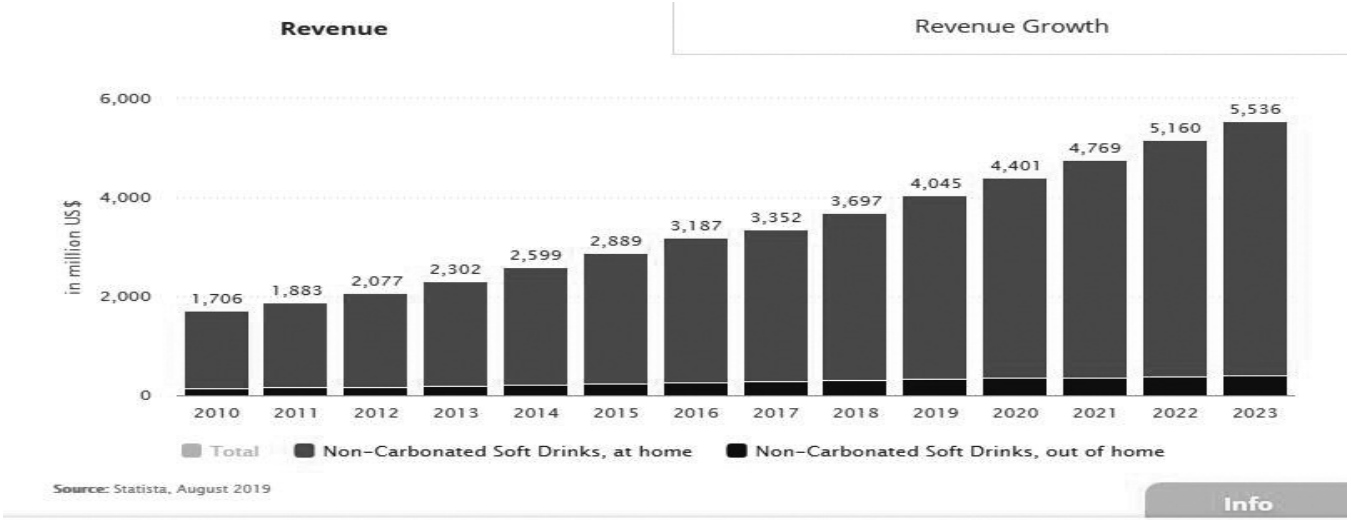


Fig. 17

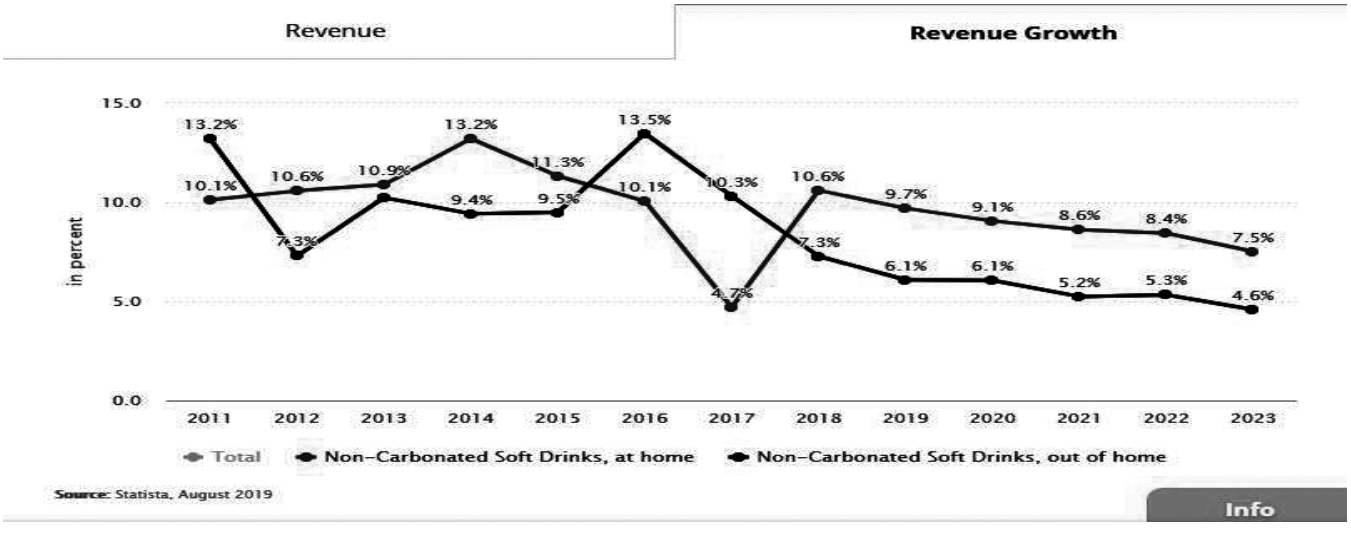


Fig. 18

1.5 The non-aerated drinks segment is another flourishing industry which is giving stiff competition to the aerated drinks segment and is currently capturing significant market share. This segment includes fruit base/ milk base drinks such as Maaza, Patanjali, Amul Kool, Nimbooz, Tetra Packed fruit juices namely Frooti, Real, Tropicana, Activ, Sofit etc. Although this segment has major players operating in organized sector namely Parle Agro Pvt. Ltd., Manpasand Beverages Ltd. etc., but there are a large number of regional, local manufacturers selling lesser known brands.

1.6 If one considers the overall market share in the soft drink segment, it shall be noted that both the aerated as well as non-aerated drinks have significant market share and a loyal customer base. With the increasing population, urbanization, better infrastructure and higher per capita income, the soft drinks industry in India is now worth more than USD 4324 million.

1.7 The soft drinks (aerated, energy and caffeinated) segment is subject to levy of GST at the rate of 28% and further cess of 12%. The effective indirect tax rate in some instances goes up to 40%. The GST rate for fruit juice/ pulp based drinks has been kept at 12% whereas all other non-alcoholic beverages attract GST rate of 18%. Such high incidence of tax acts as an incentive to the assessees to evade taxes. The assessees avoid paying GST and other taxes with a view to subsidise its products and as a consequence evade Income-tax as well. Tackling this menace proves difficult for the revenue officers.

1.8 However with the advent of the new age information technology and the financial profiling which is now possible with the integrated data mining being undertaken by the Government, the Assessing Officers can identify the possible loopholes and areas of evasion of taxes and address the same.

1.9 In the soft drink segment, the number of bottles purchased & used by the assessee acts as an important parameter to gauge the turnover of the company. However because of the reusable nature of the bottles, it is essential to ascertain the number of "bottle turns" or "velocity" to make the best estimate of the turnover.

1.10 The number of times a bottle comes back to the bottler for being filled during a year is known as 'bottle turns' or velocity. This is measured by the equation:

Bottle turns (Velocity) = {Total volume turnover}/ Gross stock of cases

1.11 For National level bottlers, having a huge quantity of bottles, the bottle turns 5 to 7 times per annum. For the regional bottlers, the bottle turns 11 to 20 times per annum, whereas in the unorganised sector the bottle turns as much as 25 to 50 times per annum. The reason for this is that normally the bottle turns depend on the range of the supply chain. In respect of national bottlers they normally have a range of 300 km radius. The regional bottlers have a range of 100 kms radius, whereas the local unorganized sector mostly operates in the nearby areas in a radius of 10 kms.

1.12 In the GST era, the "bottle turns" can henceforth be identified with much ease. Under the GST laws, the movement of goods is now required to be undertaken through E-Way Bills. In the circumstances where the bottles move from the factory to the distributors or the depots, the trail can be easily identified on real-time basis through E-Way Bill Database. Consequently even when the bottles are returned, the distributors/ depots have to issue E-way bills, which makes tracking of "bottle turns" manageable.

1.13 It may however be pertinent to mention that E-Way bills are not mandatory for intra-State movements and hence ascertaining the number of bottle turns of local & unorganized players, who have a radius of 10–100 kms, may be difficult. Nevertheless the industry data may well be taken as a comparable, with suitable adjustments, to identify and estimate the bottle turnover of the local players.

2. The unorganized sector, though not organised, is still having considerable presence. It exists in small towns and does good business. In the sector, most manufacturers do not maintain proper books of account. This renders examination of the accounts difficult. However, under the GST laws, all manufacturers are now required to file monthly/ quarterly returns which makes tracking of the turnover easy. With the concept of registered and unregistered dealers, the extent of unorganized business is also unascertainable. The sales made to unregistered dealers can be identified through the GST returns and the same may be targeted for enquiry and investigation to identify under-invoicing and tax evasion.

2.1 Similarly even the purchases made by the soft drinks segment can now be tracked through the GST returns. In the aerated segment, the purchases, especially of carbon dioxide, is an important barometer to judge the overall business of the company. Percentage of carbon dioxide in the liquid is constant. Accordingly if enquiries could be made as to how many cylinders of carbon dioxide have been purchased by the manufacturer, some idea can be had of the turnover effected. The purchases made from registered and unregistered dealers can be identified from the GST returns. The enquiry & investigation may be concentrated more on the unregistered purchases where there is more scope for bogus billing, false invoicing leading to tax evasion.

2.2 Armed with the above data, the Assessing Officers can very well correlate the purchases with the sale, undertake quantitative and cost analysis and identify the correct turnover, profitability etc.

3. THE MULTINATIONALS

3.1 In respect of the two main players (Coca Cola and Pepsi) the most elaborately guarded secret is the composition of the concentrates. In fact, most of the formulae of concentrates now being used in India, belong to the MNCs and the secret of these concentrates is available only to very few and that too in their overseas headquarters. However, Coca Cola concentrate is assembled or manufactured at Pirangut near Pune, Maharashtra. Similarly, Pepsi concentrate is being assembled or manufactured at a place called Charno near Patiala in Punjab. The erstwhile Campa Cola, which is now in circulation, sparsely has its concentrate manufacturing plant in Delhi.

3.2 The concentrate is different for different types of soft carbonated drinks and a specific quantity of this concentrate is mixed in a bottle. For a 300 ml bottle, the quantity of concentrate that would be mixed is different compared to the quantity of concentrate that would be mixed in a 500 ml bottle. It also depends on the variant of cola drink such as Diet Coke/ Pepsi Diet or Coca Cola Zero Sugar/ Pepsi Zero Calorie. As per unverified information, 23 gms of concentrate is normally mixed in a 300 ml bottle. The actual formulas are highly guarded secrets for ages. The MNCs keep a strict watch on the concentrates being mixed in a bottle. Even a 2% variation in the dilution can be found out by these multinationals through regular checks carried out by them at various bottling plants and as a matter of fact such plants, where variation in the mixing of the concentrate is observed, are immediately directed to be closed by them. Every crown of a bottle has a FPO number of the plant, where the bottle has been filled. With the help of this FPO number, on the inside of the crown, their checking squads find out the location of the plant where the erring bottle (a bottle with either lesser quantity or lower concentrate drink) has been filled and raids are carried out by the checking squads of these multinationals at such bottling plants.

3.3 Filling of bottles is done either in the *Company-owned Bottling Outlets (COBO)* or at the franchisee bottlers' facility. The COBOs are under strict supervision of the company-

appointed executives in hygienically operated bottling plants. Franchisee bottlers are mostly the erstwhile manufacturers of soft drinks like Thums Up, Limca, Fanta and Sprite. With the onset of globalisation, the entire marketing scenario has undergone a sea change. An MNC in the field used to have several Indian companies (each catering to a region) with a foreign holding company. Coca Cola has a holding company-Hindustan Coca Cola Holdings (P) Ltd. There were several subsidiaries to this company. These subsidiaries had earlier taken over the operations of most of the Indian bottlers and their plants. These subsidiaries have been merged and amalgamated into a single subsidiary called Hindustan Coca Cola Beverages (P) Ltd. Most of the financial transactions and money circulation is through the holding company. The Coca Cola Company (TCCC), USA, is the parent holding company for the Indian companies. Thus a pyramid structure has been formed at the pinnacle of which is the Coca Cola Company, USA. The two cola giants have smoothly taken over the operations through a series of chains and mergers and demergers. The ultimate control of their operations remains with the overseas parent.

4. OPERATIONS IN A BOTTLING PLANT

4.1 Most of the bottling plants run by the MNCs are hygienic, automatic and state of the art. The water and concentrate are not touched by hand at all. The whole system runs on a conveyor belt, which moves and takes empty cans (330 ml) or bottles (300 ml) to a rinser, where these are inverted and cleansed and taken to the filling spot through the conveyor belt. Most of these 330 ml cans are imported and stocked in the warehouse of the plant. Similarly, the used bottles which are received back from the market, from the distributors, are also stocked in the warehouse. To repeat, these cans are loaded on the conveyor belt and they are taken to the rinser, inverter, and then again cleaned by an automatic system before being taken to the filling position.

4.2 At the filling position, a concentrated mixture of the respective soft drink is prepared in huge cans. This concentrated mixture consists of a fixed quantity of the concentrate, sugar and water. The water being used is highly purified water carrying no bacteria or virus. The concentrated mixture is filled into a filler bowl along with more water and mixed with Carbon dioxide. From the other side, the cans to be filled in approach on a conveyor belt and this concentrated mixture along with further water and carbon dioxide, which is available in the filler bowl, is filled into the cans at a very high speed and pressure. The temperature is kept very low during this operation and thereafter the cans are sealed. The 330 ml cans are then passed through a warmer to bring them to normal room temperature, i.e. 25–26°C. The conveyer belt then takes these filled cans to a coder where the batch number, date of manufacturing, FPO No and maximum retail price is printed on to the cans.

4.3 The conveyer belt then passes through afiltec which is a machine that automatically rejects under-filled cans. Such under-filled cans are considered as a waste and they are not supplied to the market. The thoroughly checked cans are then conveyed to a packing machine which fills 24 cans into one corrugated box. Thereafter, these boxes are conveyed to a box coder which puts the seal for the week of manufacturing alongwith the batch number. These boxes are then passed through a palletizer which carries out proper alignment and packing of these corrugated boxes. From there these are off loaded into trolleys. These trolleys are then manually taken to a warehouse where the boxes are stocked for being despatched to the distributors.

4.4 A similar procedure is followed with regard to 300 ml bottles. These are cleaned and rinsed by the conveyer belt and then they are taken

to the filling area where concentrated syrup (concentrate + sugar + water) is available in huge bowls. This concentrated syrup is mixed with more water and carbon dioxide and then it is taken to the filler bowl. From the other side, bottles are conveyed where these bottles of 300 ml are filled at very high speed and pressure and low temperature. These bottles are then automatically crowned at a very high speed and are taken to a coder where the batch number, FPO Number, date of manufacture and maximum retail price is automatically printed. For the bottle there is no lifted system. Bottles are manually inspected and if any of the bottles has not been filled to the full capacity, then the same is removed manually. Thereafter, these bottles are conveyed to a packer where 24 bottles are filled in a plastic crate. These crates are then taken manually by trolley to the warehouse where they are stocked for despatch to the distributors. There is no particular concentrate used for filling of soda water bottles. They are directly filled with water and carbon dioxide under pressure and speed at low temperatures and then manually inspected for the quantity and then 24 bottles are packed into a plastic crate.

4.5 On a rough estimate, 56 units of Thums Up (now taken over by Coca Cola) concentrate will give around 15,700 litres of concentrated syrup which, when mixed with water and carbon dioxide, would fill approximately 3 lakh bottles of 300 ml each i.e. around 90,000 litres of the final product. Similarly, 56 units of Coca Cola concentrate when mixed with water and carbon dioxide, will give around 14,900 cases (24 bottles in each case) of 300 ml bottles i.e. 357,600 bottles of Coca Cola. Thus, 56 units of concentrate would give approximately 107280 litres of finished product. The same 56 units of Coca Cola concentrate would fill around 13575 cases of 330 ml cans i.e. in all 325800 cans. It means, 56 units of Coca Cola concentrate when filled in cans would give around 107514 litres of the finished product whereas as far as 300 ml bottles are concerned, the same 56 units would give 107280 litres of finished product, i.e. 234 litres less. The reason is that in the filling Section when the bottles are filled, as the diameter of the opening is small, in spite of greatest precision, there is some spillage of the final product. However, when the same liquid is filled in cans, as the opening of the can is of larger diameter compared to the bottles, the wastage is much less. It may be pointed out that in the organized sector the percentage of concentrate efficiency is very high and in fact it is as high as 98.5% to 99%.

5. ACCOUNTING IN BOTTLING PLANTS

5.1 At the end of the day or after the third shift, exact details of all the raw materials consumed, finished product obtained and wastage is normally available to the last digit. The Finance Manager gets all the reports from the warehouse in-charge, regarding the finished products stocked, and from the Production Manager regarding the production effected during the day. The Finance Manager then matches the two figures find out any spillage or loss. Normally, an inventory is prepared once a month. In a quarter (three months), the inventory is prepared in the cycle of 4 weeks + 4 weeks + 5 weeks, i.e. in the last month of the quarter the cycle of 5 week is applied and in the first two months, the cycle of 4 weeks is applied. At the end of every quarter, the exact details of receipts and issue, production in pipeline and stock of finished products are worked out.

5.2 The books of account maintained are the following:

i. Inventory module for all the inventory items.

ii. Subsidiary inventory module for receipts, issue, production in progress and finished products.

iii. With regard to trade creditors, where certain amounts are payable, a separate register is kept. It gives details of fixed suppliers, approved by the company as per the quality control and local laws.

iv. Day book or cash book.

v. Petty cash book.

vi. Bank book.

vii. Suppliers ledger.

viii. **Sales Ledger:** This would include despatch of the finished product to the depots. From depots, finished products are transferred to distributors. From the distributors the finished products are sold to the retailers.

ix. **Imported Cans Register:** 330 ml cans are imported and such imports are carried out at one point and from there these empty cans are transferred to various bottling plants of the same company.

x. **Bottles Module:** account of 300 ml bottles is kept and, as per practice, these bottles are valued at the deposit price.

5.3 From the above, it would be seen that most of the details, as prepared by these bottling companies, are the same as in any other business. The only difference is that, in the business of soft drinks, the cost of the material itself is very low compared to the cost of the finished product charged to the customer. Apart from the concentrate what is required is only sugar, carbon dioxide and water. The maximum amount of expenditure is actually on the overheads. These overheads include the costs of running and maintaining the plant, cost of maintaining the warehouse and the costs of advertisement and distribution. Very high salaries are paid by the MNCs, not only to their executives, but also to the lower functionaries and the workers. For a bottle of soft drink which may cost Rs. 8 to the customer, the actual cost of the liquid inside the bottle to the manufacturer may not be more than Rs. 1.50. The rest is the profit margin and the extraordinary expenditure in the manufacturing process and marketing. The MNCs are not prepared to cut down on their quality or their profit margin. They seek to increase their sales by aggressive promotion rather than by lowering price. All those interesting ads and the fabulous amounts paid to the brand icons are at the cost of the consumer. The so-called fierce competition between the colas is confined only to the promotional front and does not extend to the price front. There are no price wars indeed!

6. TAX INVESTIGATIONS

6.1 One of the items which is to be enquired into is the invoice rate of the bottle when supplied to the distributor. There is a general perception that there is a chance of under-invoicing by the companies while supplying the bottles to the distributor. This aspect can be examined by making enquiries or conducting surveys at the depots and the distributors. By determining the bottle velocity, a fair idea regarding the total amount of the finished product can be obtained by finding out the availability of total glass bottles. This can be compared with the sales declared by the company.

6.2 The entire purchase of 330 ml empty cans is through imports. Thus, the total cans imported during the year can be obtained. From that, by obtaining the details of the opening stock of empty cans and by finding out the total cans available at the end of the year, the consumption of the cans for filling during the year by the company can be ascertained. The sale vis a vis the cans filled in by the manufacture can thereafter be determined.

6.3.1 The stock of 300 ml bottles is huge. It is replenished by the company through local purchases. The main manufacturers of *glass bottles* are:

i. Larsen and Toubro Ltd (Glass), L&T House, Malad, Mumbai.

ii. Owens Bilt Ltd, 135, Brigade Towers, 6th Floor, 609/610, Brigade Road, Bangalore.

iii. Owens Brockway (India) Ltd, Glass Unit, 197–198, Bombay Pune Road, Pune.

iv. Owens Bilt Ltd, Plot.No.15, A Block, D 1, Micchinhwad, Pune.

6.3.2 The main suppliers of *crowns* for bottles are:

i. Larsen and Toubro, Division No.15, Opp: Gandhigram Railway Station, Ahmedabad.

ii. Larsen and Toubro, Ganges Ink Building, 110, lb Market, Vikroli, Mumbai.

iii. Manaksia Closures Ltd, 24, DamjiShamji Industrial Complex, Andheri, Mumbai.

iv. Manaksia Crowns Ltd, Survey No. 161/2, Village Khutlivia, Khanvel, Silvassa.

v. Vora Industries, 5, Vardaman Industrial Estate, Village Road, Bhandup, Mumbai.

vi. Asoka Metal Decor P Ltd, 145, Anand Industrial Estate, Mohan Nagar, Gaziabad, UP.

vii. Adit Metal Decor, 53/73, Ramjas Road, Karol Bagh, New Delhi.

viii. Cans and Closures Pvt. Ltd, P 6, CIT Road, 4th Floor, Calcutta.

ix. Vora Enterprises, 75, Village Road, Bhandup, Mumbai.

x. Miniksh Crowns Ltd, 38, Sunder Nagar, Hyderabad.

6.3.3 The other major item of use in this industry is the *plastic crate* used to transport the bottles. The major suppliers of plastic crates are:

i. Nilkamal Plastic Ltd, 77/78, Nilkamal House, Road No.13/14, MIDC, Andheri East, Mumbai.

ii. National Plastic Ltd, Western Express Highway, Andheri East, Mumbai.

iii. The Supreme Industry Ltd, RS 112/4, Sudurpeta Industrial Area, Sudurpeta, Pondicherry.

iv. Supreme Industries Ltd, C 30 and 31, Phase II, Noida, Gautam Budha Nagar UP.

v. Prince Metal Plast, 33 Marol Cooperative Industrial Estate, MV Road, Andheri (E), Mumbai.

6.3.4 The main suppliers of the *wooden crates* are:

i. Dhanjal Timber, Khajuri Road, Yamuna Nagar, Haryana.

ii. Rishabh Wood Works, 1/5, Begawan Bhuvan, Hanuman Road, Ville Parle, Mumbai.

6.3.5 Another item of importance used in this industry is *carbon dioxide gas.* The main suppliers of this gas are:

i. Sicgil India Ltd, Dhun Building, 827, Anna Salai, Chennai.

ii. Pure Liquid Gas P ltd, Ramoli Industrial Estate, Baroda.

iii. The Bombay Carbon dioxide Gas Corporation, 107 Wodehouse Road, Mumbai.

iv. Shivshakthi Gases P Ltd. 1, Tyagi Market, Prahlad Garhi, Sahibabad, Gaziabad

6.3.6 In non-carbonated soft drinks segment, one packaging item has got its widespread use. It is tetra packs. It is mainly used for packaging juices and comes in mainly in two different sizes i.e. 200 ml and 1 L. The following concerns are main suppliers of tetra packs to this industry:

i. M/s Tetra Pak India Pvt. Ltd., Gurgaon;

ii. M/s S.G. Star Drinks Pvt. Ltd., Sonipat;

iii. M/s Topworth Group of Companies, Mumbai

iv. M/s Zuberi Fibres Pvt. Ltd., New Delhi.

6.3.7 As all these concerns are well established with proper accounting systems, cross-verification of purchases from them, both price-wise and quantity-wise, is possible and should be done in case of suspicion.

6.4 One element which provides the scope for manipulation is the recently introduced *plastic bottle.* These bottles come in sizes of 500 ml,

1 1/2 litre, 2 litre and so on. As this is a recently introduced concept, there is not much information available about the manufacturers and suppliers of the bottles to the national players. Glass bottles are returnable and there is some inventory of stock. This enables investigation of the turnover. Plastic bottles, on the other hand, are use and throw items. As such, there is no inventory of stock. This makes it difficult to determine the turnover. Unless the AO can find out how many plastic bottles were purchased, how many used and how many remained in stock, he will be hard put to determine the turnover. He should make enquiries from the bottle suppliers, and cross-verify the assessee's claim. For example, the cold drink major Coca-cola has revealed that it had used three million tonnes of plastics in the year 2017. Hence, with the average weight of 10 grams a bottle, it employed 300 million plastic bottles in that year. This should give a fair clue to the Assessing Officer about the turnover of the company.

6.5 With the likes of Google, Starbucks, Apple, Coca Cola, Pepsi undertaking rampant white-collar tax evasion at Global level, the assessing officers should also be alert and identify tax structures which are illegitimate and meant to evade tax. The provisions of GAAR have recently been introduced in the Income-tax Act, 1961 to combat such illegal tax planning by MNCs. In the soft drink industry as well, the high indirect tax incidence and comparative higher Income-tax rates in India, in comparison to other developed countries, there is a tendency of MNCs to build complex corporate structures to siphon off profits outside India and/ or overall reduce the tax liability in India. MNCs infuse equity in the Indian subsidiary in the form of debt to gain a tax shield by getting tax benefit on interest payments from India and lower tax rate on interest income outside India. Several other tax avoidance methods are deployed to evade tax. The Assessing Officers should examine the Multilateral Convention & BEPS, to which now India is also a party, and ensure that the MNCs pay appropriate taxes on the income derived in India.

6.5.1 The Indian subsidiary of an MNC imports the concentrate from its holding company abroad. There can be over invoicing of the price by the foreign parent. The AO should be alert to this possibility. The AO should also insist on a proper explanation for any variation in the quantity of the concentrate actually imported and the amount shown in the books of account.

6.6 In the past an *MNC Took over a Local Brand* like Thums Up, Limca or Maaza. It purchased the concentrate from the erstwhile manufacturer. It marketed the local product through its own outlets. While enquiring into the turnover of a national player, this aspect should be kept in mind. The enquiry should cover the turnovers referable to both types of concentrates-their own (whether manufactured in India or imported) and the ones acquired from local brands. The AO should ascertain the yield from indigenous concentrate and reckon it against the production.

6.7 Sometimes MNCs buy the finished product itself in liquid form, filled in bottles or cans, from a local manufacturer of an unbranded Indian soft drink. They market the drink under their own brand. For example, Mewar Bottling Co. Ltd, Badgaon, Udaipur supplies the finished products to the national players.

7. CONCLUSION

The Investigating Officer/ Assessing Officer has a gargantuan task cut out for him/ her in investigating the tax evasion modes of soft drink majors such as Coca cola, Pepsi, Parle Agro etc. as their volume and scattered geographical presence poses a challenge. The aspects of tax evasion methods are indicative in nature and the IO/ AO is advised to employ his/ her own wisdom in approaching the tax evasion methods resorted to by the assessee. Although, in the age of internet and post GST era, it will not be such a difficult task where plethora of information is available in public domain.

CHAPTER 16

Sugar Mills

1. INTRODUCTION

1.1 Sweeteners have been used by living beings since hundreds of years. Honey, one of the oldest sweeteners has been used by human beings, animals and birds alike. The synthetic sweeteners are the latest arrivals on the scene. Sugar, however, occupies the most prominent position among all the sweeteners and it will probably continue to do so.

1.2 Sugarcane, the basic raw material for sugar was found growing in the wild. Human beings, later on started cultivation of sugarcane in South East Asia about 50,000 years back. Gradually but steadily the cultivation of sugar cane grew and at present it is grown in a large number of countries namely India, Brazil, Indonesia, Cuba, Mauritius etc. Sugarcane is the basic raw material for gur, sugar and alcohol. Although these items have been manufactured using other raw materials also but sugarcane has over a period of time, emerged as one of the cheapest and reliable sources of raw material.

1.3 Present economic trends show a great future for the sugar industry. The by-products of sugar industry are likely to play a more important role than sugar itself. The production activity depends on power, fossil fuels i.e. coal and oil which are classified as limited resources and may not last for more than a few 100 years. In the coming years, therefore, ethanol, a by-product from the Sugar Industry, is poised to play a major role as an alternative fuel for vehicles and power plants.

1.4 India is a second largest producer of Sugar in the world after Brazil. There are 735 sugar factories in the country as on 31/01/2018 with crushing capacity to produce around 340 lakh MT of Sugar. In F.Y. 2017–18, India's sugar production is pegged at 323 lakh MT. Today, Indian Sugar industry's annual output is worth approximately Rs. 80,000 Crores. Sugar industry is the second largest agro based Industry, next only to the Cotton based industry. It plays a very important role in the economy of the country. It influences the economy of the country in several ways. Some of these are enumerated as under:

1.4.1 It encourages sugarcane cultivation and thus provides jobs to a large number of the rural population. Although, agricultural activities provide job opportunities to rural folk in general, sugarcane cultivation provides better opportunity as cash realisation from sugarcane cultivation is much better than any other crop.

1.4.2 The sugar mills, sugarcane crushers and kolhoos which are engaged in the manufacture of sugar, khandsari & gur provide substantial employment to the people around sugarcane growing areas. This employment is again very substantial and plays an important role in the rural economy. Sugar cane crushers and kolhoos, however, sooner or later will be discarded as the percentage of recovery through this process is very low.

1.4.3 A large number of jobs are created in transporting, storing & marketing of sugar, khandsari & gur. These jobs cover rural and urban areas both. Sugar industry impacts rural livelihood of about 5 crores sugar cane farmers and around 5 lakhs of workers directly employed in sugar mills. Employment is also generated in various ancillary activities relating to transport, trade, servicing of machinery and supply of agriculture inputs.

1.5 Looking to the importance of the sugar Industry and its contribution to the national exchequer, it is extremely important to understand the working of the industry closely.

2. MANUFACTURE OF WHITE SUGAR

2.1 In India sugar is manufactured from sugarcane. In Europe and certain other countries beetroot is also used for manufacture of sugar. There are certain well defined areas of sugarcane cultivation in India. These are Maharashtra, Uttar Pradesh and Bihar. Besides, small quantities are also cultivated in other areas including Punjab and Haryana. The sugar mills consequently are also clustered in these areas. The sugar mills purchase sugarcane from surrounding areas and manufacture the sugar from the same. The yield of sugar depends on several factors. Some of them are:

2.1.1 Quality of Sugarcane: The yield of sugar depends besides other things, on the quality of sugarcane. Different varieties have been developed by various institutes engaged in the development of the sugar industry. The yield also depends on maturity of the sugarcane. Fully ripe sugarcane harvested at the proper time may give yield upto 14%. The yield however, generally remains at about 11%.

2.1.2 Proper and Timely Transportation: After harvesting, sugarcane starts loosing moisture. The loss of moisture in turn results in reduced yield of sugar. It is therefore very important that sugarcane should be transported to factories and crushed as early as possible after the harvesting.

2.1.3 The Machinery: In order to get optimum yield of sugar from the sugarcane, the mill machinery should be able to extract the maximum amount of juice from the sugarcane. Continuous repair and updating of the mill machinery is important in this regard. Old machines based on out dated technology can reduce the yield substantially.

2.2 Sugar cane is transported to sugar mills in bullock-carts, trucks, tractors or railway wagons. Sometimes, it is purchased by purchasing agents appointed by sugar mills for the centres in the region, who in turn send the sugarcane to the factory. On arrival at the factory, the cane is weighed on the weighing bridge near the entrance of the factory. Thereafter, the cane is fed into the revolving cane carrier and is broken up with the help of revolving knives.

2.3 The cut cane is fed into crusher where primary juice is extracted from the cane. The extraction of primary juice constitutes the first process in the manufacture of sugar. Mill House is the crushing unit, which consists of cane carrier, cane cutters and cutting knives, million tendom (4 to 6 mills of 3 rollers each), Bagasse carrier and conveyer.

2.4 Cane feeding to the cane carrier is done either manually or by mechanical unloading cranes. As the cane carrier moves, the cane kicker evens out the load in the cane carrier and then two sets of cane knives cut them into small pieces. This process of cane cutting is called cane preparation. On passing the cut cane into

heavily grooved rollers in the mills, the juice is extracted and the woody fibre known as bagasse is taken to the boilers and used as fuel. There are usually 2 or 3 boilers in a sugar factory which generate steam by burning bagasse. This unit is known as a Boiler House. The steam generated from the boiler is utilised for driving mills using impulse turbines and power generation in turbo-alternators. The power generated is sufficient for running different electrical units of a sugar factory. Depending on the moisture content, fibre content and the condition and type of boiler, one pound of bagasse produces about 2 to 2.2 lbs. of live steam.

2.5 The primary juice or the liquid pressed out of the cane is a foaming, turbid and somewhat muddy grey to brownish green liquid. One kg of this juice comprises of 75–140 gms of sucrose, 840–900 gms of water and 20–25 gms of solids. The juice is sieved to remove particles of bagasse and other foreign matter. It is then passed on to measuring tanks.

2.6 The next process is that of purification of juice, called clarification process. The juice is passed on to the juice heater where it is heated. Thereafter it enters the clarification tanks where it is mixed with milk lime. The lime combines with sucrose present in the juice. The unit dealing with the process is known as clarification unit. The clarification tanks are either Carbonation tanks or Sulphitation tanks. In the carbonation tanks, carbon dioxide gas is passed through the solution. It combines with lime already present in sugarcane juice to form calcium carbonate, which settles down as a precipitate, carrying with it many impurities. The sugar remains dissolved in the juice. The juice is then filtered to remove the sediments called 'press-cake'. In the Sulphitation tank, sulphur dioxide is pumped in the lime juice. The sulphide mixture is then boiled and allowed to settle. The clear juice is decanted while the muddy juice at the bottom of the settling tank is filtered to remove the 'press cake' as in the carbonation process. The purified juice is then sent to vacuum evaporators, where it is dried under reduced pressure to the consistency of syrup. The syrup is then sulphitated in the syrup Sulphitation tank and filtered, if necessary.

2.7 The next process is the boiling and curing process, which results in the formation of white crystal. The unit dealing with this process is known as the Boiling house. In this process, the syrup is passed to the vacuum tanks where it is boiled until a mist of fine white crystal appears. More syrup is gradually introduced and the boiling is continued to allow the original crystals to grow. When the crystallisation reaches the desired stage, the whole mass, technically known as 'Massecuite', is dropped into a tank called the 'Crystaliser' where it cools down, thus completing the crystallisation. Cooled massecuite, containing crystal and the surrounding liquid known as 'molasses' is fed into rapidly rotating copper baskets called 'centrifugal tank', where molasses are thrown out and sugar crystals are retained. The crystals in the baskets are washed, to remove particles of molasses. The washing, called 'light molasses', is collected separately. These crystals are then dried with steam and are removed from the baskets to a drying cylinder heated by a close steam pipe or hot air and then passed on to a storage hopper. By letting in hot air, the sugar is dried and taken to a grader where different grains are separated and bagged. After packing in bags, it is transferred to stores.

2.8 The final molasses thrown off is of the lowest grade from which it is not profitable to extract further sugar. Sometimes this waste is stored for re-processing during the following crushing season, either in the form of 'massecuite' as such or in the form of brown sugar after separating the crystalline mass from molasses. Molasses is pumped into a tank for storage.

3. YIELDS

3.1 The variations in percentage yield of Baggase and molasses are mainly due to varying characteristics of the cane, soil condition, climatic changes, etc. In case of press cake, due to high moisture percentage at the time of

production, there is possibility of loss in weight during storage to the extent of 50%. In general, a large proportion of bagasse is utilised as fuel for generation of steam. Surplus bagasse, after meeting the fuel requirements of the factory, is sold to paper mills for being utilised in the manufacture of board.

3.2.1 Molasses are also used in production of power alcohol, industrial alcohol and potable spirit. Almost 60% of molasses produced are utilised for these purposes and the balance 40% are utilised for preparing smoking tobacco and some other purposes. Small quantities are often used in making lower grades of confectionery and golden syrup. Press cake of sulphitation unit is used as manure while that of carbonation unit is used as manure while that of carbonation unit is usually burnt. *Ethanol is one such by-product.*

3.2.2 To make molasses, sugar cane is harvested and stripped of leaves. Its juice is extracted, usually by cutting, crushing, or mashing. The juice is boiled to concentrate it, promoting sugar crystallization. The result of this first boiling is called first syrup ('A' Molasses), and it has the highest sugar content. First syrup is usually referred to in the Southern states of the United States as cane syrup, as opposed to molasses. Second molasses ('B' Molasses) is created from a second boiling and sugar extraction, and has a slightly bitter taste.

3.2.3 The third boiling of the sugar syrup yields dark, viscous blackstrap molasses ('C' Molasses), known for its robust flavor. The majority of sucrose from the original juice has crystallized and been removed. The caloric content of blackstrap molasses is mostly due to the small remaining sugar content.

3.3.1 Ethanol: Ethanol is an agro-based product, mainly produced from a by-product of sugar industry, namely molasses. Ethanol is an alternative energy source. When mixed with unleaded gasoline, ethanol increases octane levels, decreases exhaust emissions, and extends the supply of gasoline. Ethanol in its liquid form, called ethyl alcohol, can be used as a fuel when blended with gasoline or in its original state. It can also be used as a raw material in various industrial processes. Ethanol can be made by fermenting almost any material that contains starch or sugar. Ethanol, when used as a gasoline component, improves combustion-helping the fuel burn more completely. Ethanol blends also reduce carbon monoxide emissions. India's interest in improving its energy security stems from its rapidly growing dependence on foreign oil. The Ethanol blended Petrol Programme (EBP) seeks to achieve blending of Ethanol with motor spirit with a view to reducing pollution, conserve foreign exchange and increase value addition in the sugar industry.

3.3.2 Earlier, ethanol was allowed to be made from C–heavy molasses, a cane by product that has no sugar content left in it. Whereas the B-heavy molasses and sugar cane juice have some sucrose content left in them for sugar production and thus, they were not allowed to use for ethanol production. Recently, the government has notified a decision to allow sugar mills to manufacture ethanol directly from sugarcane juice or an intermediate product i.e. B-heavy molasses. Manufacturing process of ethanol depends upon type of sugar production plant and feed stock i.e. sugarcane juice or B-heavy molasses or C-heavy molasses or bagasses.

3.3.3 The new Bio-Fuel Policy, 2018 has fixed a target of achieving 20 per cent ethanol blending with petrol by 2030. The current consumption of fuel sets 3300 million litres of ethanol requirement to achieve 10 per cent of blending target by 2022 for the entire country excluding J&K, North Eastern states and Island territories. In the current season (December 2018 to November 2019), India is set to close in on the highest ever of 7.2 per cent of ethanol blending with petrol.

3.4 Proper records are required to be maintained showing the quantity and value of by-products produced, their disposal and the closing balance.

The basis adopted for the valuation of the by-products should be reasonable and consistent. Molasses should be valued at the controlled rate fixed by the respective State governments. The actual realisation obtained from the sales of by-products should be shown in the records.

4. MAINTENANCE OF RECORDS

4.1 The Cost Accounting Records (Sugar Industries) Rules, 2011 notified by the Government of India, Ministry of Corporate Affairs, vide G.S.R. No. 872(E) of 7th December, 2011. These are applicable to every company, including a foreign company as defined under Section 591 of the Companies Act, 1956 which is engaged in the production, processing or manufacturing of sugar activities and wherein, aggregate value of net worth as on the last date of the immediately preceding financial year exceeds five crores of rupees;or wherein the aggregate value of the turnover made by the company from sale or supply of all products or activities during the immediately preceding financial year exceeds twenty crores of rupees; or wherein the company's equity or debt securities are listed or are in the process of listing on any stock exchange, whether in India or outside India. It is obligatory for all such companies to maintain the books of accounts containing the particulars specified in Proformae A to I annexed to the above Rules, which relate to utilisation of material, labour and other items of cost in respect of white or raw sugar or both. The books of accounts so maintained should facilitate calculation of cost of production or the cost of sale of sugar during a particular period. Therefore, these books can be of great help for investigation. Wherever a sugar factory is registered as a company under the Companies Act, it has to maintain the books of accounts specified under the Cost Accounting Records (Sugar Industries) Rules, 2011.

4.2 Performa A to I annexed to these Rules, prescribe that proper books of accounts containing inter-alia the particulars mentioned therein, relating to the utilisation of material labour and other items of cost, have to be kept. The records required to be maintained are in respect of materials i.e. sugarcane, process material, consumable stores and wastage, spoilage, rejections, losses etc. of materials. Further, proper records are to be maintained about salaries and wages, steam and power utilised and various items of expenses comprising the overheads. Even in respect of by-products, the Rules require that proper records shall be maintained for each by-product showing its receipts/ issues and balance, in quantity and value.

4.3 Records to be Maintained under the CGST Act, 2017: Sugar is a taxable commodity and as such its manufacture and sale is subject to control of GST provisions. Some of the important registers prescribed by the CGST Act are as under:

a. **Section 35(1) Read with Rule 56(12):** Mandates that every registered person engaged in manufacturing of goods has to maintain on monthly basis the quantitative records of raw materials or services used in manufacturing and also records of goods so manufactured including the waste and scrap thereof. These records are not limited only to quantitative but extends to value base also.

b. **Inward and Outward Supply of Goods or Services or Both:** Registered person shall maintain the records of all inward supply of goods and services. Inwards supply includes the supplies on which registered person is liable to pay tax on reverse charge. In addition to inward supply the registered person shall maintain outward supply details of goods or services. Rule 56(1) also mandated that every person shall maintain true and correct account of supplies attracting

payment of tax on reverse charge along with the relevant documents including vouchers, bills of supply, delivery, challan, credit notes, debit notes, receipt vouchers, payment vouchers and refund vouchers.

c. **Stock of Goods:** As per Section 35(1) every registered person shall maintain stock of goods. It is also prescribed in rule 56(2) that every registered person, other than a person paying tax under Section 10, shall maintain the accounts of stock in respect of goods received and supplied by him, and such accounts shall contain particulars of the opening balance, receipt, supply, goods lost, stolen, destroyed, written off or disposed of by way of gift or free sample and the balance of stock including raw materials, finished goods, scrap and wastage thereof. Here the phrase "goods received and supplied" is used. Rule 56(12) has mandated for every taxable person engaged in manufacturing of goods shall maintain the stock of goods.

5. EXAMINATION OF PRODUCTION REGISTERS

5.1 It is useful to examine these registers and compare the figures with the production, purchases, and sales account.

5.2 The GST provisions do not exercise day-to-day check over maintenance of the prescribed registers which are prepared by the employees of the factory. There is thus no system of keeping constant watch over the day-to-day postings made in the various registers. The entries and postings in the registers may sometimes be tampered by the employees at the instance of the factory owners with a view to suppress the actual output of sugar. Therefore, the authenticity of the GST records also needs proper scrutiny by the AOs during assessment. These records should be tallied with the records maintained under the Income-tax Rules and the Cost Accounting Records (Sugar Industry) Rules, 2011.

6. SUGAR POLICY AND SYSTEM OF PARTIAL DECONTROL

While at present the government is following a policy of partial control, it was not always so. It has varied from little or no control to full control on distribution and sale of sugar. Under Section 18G of Industries (Development & Regulation) Act, 1951, Central Government has power to control supply, distribution, price, etc. of certain articles and under these powers, the Government has been announcing its policy from season to season. The AO should make himself familiar with the orders that are issued by the Central Government and also by the State Governments regarding such controls. The AOs should also get acquainted with the sugar policy of the Government in respect of percentage and rates for free sale sugar as well as for levy sugar and correctness of figures of sales disclosed by the sugar mills.

7. TAX INVESTIGATIONS

7.1 Sugar Recovery

7.1.1 The first issue to be examined is the recovery percentage of sugar. The sugar content in cane (called 'pol'), as well as the yield of sugar i.e. percentage of weight of sugar produced to weight of sugarcane crushed varies in different parts of India owing to climatic and soil conditions, etc. The percentage recovery of 'pol' ranges from about 8–16%.

7.1.2 The sugar recovery depends on various factors e.g.:

i. Sometimes sugar factories start operations earlier than the normal start of the season, or close late, in order to claim Excise Rebate. Early crushing results in crushing of immature cane and late crushing in crushing of dry cane.

ii. Even distribution of rainfall during the main growth period of cane *viz.* July to September.

iii. Variety of cane.

iv. Soil, climate, etc.

7.1.3 The disclosed yield should be compared with the corresponding figure of the preceding season and also with the yield shown by comparable factories in the neighbourhood for the season. Even slight variation in yield makes a large difference in the total production. Therefore, the question of reasonableness of the yield shown, should be scrutinised closely. Wherever the disclosed yield is found to be low, assessee's explanation should be called and examined. In case the explanation is not satisfactory, it must be examined whether the production has been understated.

7.1.4 Low yield can also be the result of inflation in the quantity of sugarcane purchased. In this connection, the following points need special attention:

i. The weighment records of sugarcane at the factory contain details of the lorries & other transport by which the cane was brought. The entries are in chronological order of receipt. It is possible to inflate the quantity of sugarcane purchased by manipulating these records. It is, therefore, advisable to go through and test check purchases with the original weighment sheets or registers maintained. Bulk of the cane purchased is usually through co-operative societies. In such cases manipulation of the quantity of cane is less likely. More critical examination may be necessary in respect of direct purchases.

ii. The supply of cane is regulated through tickets or supply slips issued by the Cane Marketing Union, to suppliers in the area. The tickets or supply slips are retained in the records. If there are suppliers without such tickets or supply slips, the genuineness of such supplies should be investigated.

iii. In most places, sugarcane is purchased through Co-operative societies on commission basis. Hence information can be gathered from such societies and the quantity purchased shown in their records can be tallied with the quantity shown in the books of sugar mills. In some States, mills have also to pay a cess to the Cane Development Societies on the basis of purchases. Arithmetic tally of the commission and cess paid to the Co-operative society and Cane development society provide a check on the quantity of cane purchased.

iv. Supply of sugarcane from the farms of the directors/ partners/ proprietors of the factory, requires special scrutiny. The total supply of cane and the yield of cane per acre in their farm should be found out. If the yield of sugarcane is obviously high, this may indicate inflation in the weight of sugarcane supplied by them. In one case, it was found that fictitious purchases were recorded in the books of the company, showing purchases of sugarcane from the directors of the company. Since the AO noted that alleged purchases from the directors were rather high, he pursued the matter, and found that gate passes for the alleged purchases were not issued from the regular serially numbered book, which was in use during the period. He also found that the stocks of sugarcane claimed to have been received from the directors in the factory premises were weighed on a different weigh bridge and so did not bear the regular weighment slip number, which appear on the purchases made in the normal course. The AO established that purchases allegedly made from these directors were fictitious recorded in the books of the company to inflate the quantity of sugarcane purchased.

7.2 Understatement of Production

7.2.1 The understatement in production is more difficult to detect in view of the detailed records

which are kept in terms of the requirements of GST Authorities. Only a detailed checking of the daily stock register may give some indication or clue where the production figures have been manipulated. The entries contained in the relevant GST registers should be test-checked, with reference to the records maintained by the sugar mills. If the production figures are manipulated over a period of time, such a test-check may lead to points on which detailed investigation may be called for.

7.2.2 One of the agencies to which a reference can be made is the Directorate of Sugar, Department of Food, Ministry of Agriculture, Delhi. Various Sugar mills are required to forward the details of production to this Directorate. In case, the AO finds any discrepancy in the production figures as per account books and as per GST Registers, he can call the details of production from this Directorate for comparison with those available in the account books and the Excise registers. Any additions on account of marginally low yield without finding out any discrepancy in the purchase of cane or production of sugar, is unlikely to survive in appeal.

7.2.3 The yield of sugar depends on various factors as raw material i.e. sugarcane is a ground produce. As such the variety of sugarcane, the condition of land, the motivation and training of the farmers and climatic conditions play a major role not only in the yield of sugarcane per Hectare, but also in the yield of sugar. Sugarcane which is properly crushed at the appropriate time after harvesting gives better yield. However, delay of few hours in harvesting and crushing results in decrease of yield. The yield of sugar varies between 9–14%. This variation of upto 5% provides a vast opportunity to manipulate records for suppressing the actual yield. While examining the accounts, monthly freight and daily production details should be obtained and analysed critically. It should however, be borne in mind that in the beginning of the season, which starts from November or so, the yield is less due to immature sugarcane coming to the Mills. Similarly, the yield declines after March and April on account of warming of the climate and hardening of sugarcane. However, if there are variations within the same month, fortnight or week i.e., suppose the yield in the first week of December is 11% and the same is only 9% in the second week of December, it requires deep analysis and enquiry, as in the normal course there should not be any variations in such a short period. The Sugar Mills normally have analysis laboratories, where the sugarcane is analysed for its sugar content on daily basis. The Laboratory records may be called for and examined in order to establish the understatement of the yield.

7.3 Under-Statement of Sale

7.3.1 The market rates of sugar are quoted on a daily basis in various newspapers including Economic Times, Financial Express etc. The reported rates of sugar during the period relevant to the assessment year should be found out to ascertain the reasonableness of the sale price shown. Most of the mills sell sugar through commission agents at a fixed percentage of the sale proceeds. Sometimes this percentage is abnormally high. In such cases the commission agent/ broker may be summoned as well as the commission/ brokerage paid to them by other Mill owners should be compared in order to establish that an abnormal brokerage is paid to these commission agents/ brokers. The management receives substantial part of the brokerage shown in the books. In one of the cases at Muzaffar Nagar, it was clearly established by the AO that excessive commission has been paid by one of the leading sugar mills. An important item, which figures in cases of sugar factories, is the sole selling agency commission. Even in times of complete or partial control, the sugar mills have been continuing with the system of sole selling agents. In times of shortage of sugar, no services at all are expected to be rendered by them and during the period of full or partial control, their role is limited. Most of the sole selling agents are closely related to the owners of the sugar factory.

It is, therefore, necessary to investigate whether the sole-selling agent have rendered services & remuneration or commission paid to them is disproportionate to the services rendered by them. If a proper investigation is made, it may be found that the remuneration or commission paid to them is not fully justified. The Company Law Board has decided against the appointment of sole selling agents for sugar industries and this decision has taken effect from 5th September, 1980. This should show that in times of shortage of sugar as is found in the present period, the appointment of sole selling agents can not be said to be justified on business consideration.

7.3.2 Differential Sale Prices Realised: In recent years many sugar mills have realised some additional sale price in respect of levy sugar which is in excess of the price fixed by the government. Such excess realisations have not been credited in the trading receipt and are often shown as liability in the Balance Sheet. This is on account of the fact that disputes have arisen between the sugar factories and the parties, who claim the extra price as refundable to them. In some cases, the High Courts and Supreme Court have passed decisions adverse to the sugar factories. As a result of adverse decisions, the extra price on the sale of levy sugar alongwith the interest thereon, has become refundable. In some other cases disputes are still pending in the courts. Though the issue regarding the taxability of such additional sale price is not finally settled, the AO should properly investigate the matter relating to this additional sale price. If the additional sale price or part thereof has not become refundable at the close of the accounting year, the same should be treated as forming part of the sale proceeds, even if it is not credited in the sales account. In one case, the AO treated the additional sale price realised by the company on sale of levy sugar, as a mere deposit on behalf of the consumers liable to be refunded and as such it represented the company's liability and he did not tax it as part of the sale proceeds. The Commissioner of Income-tax cancelled the order of the AO under Section 263 but the Appellate Tribunal set aside the order of the Commissioner. Thereafter, the AO reopened the assessments and completed the same after adding the additional sale price. The company, has challenged this reopening before the appellate authorities. In another case, the assessee excluded the excess realisations resulting from higher price charged for levy sugar, from the sale credited in the trading account and claimed during assessment proceedings that this sum has been credited to levy sugar equalisation fund, and it should not be treated as its income till disposal of the appeal by Supreme Court. The assessee's plea was not accepted by the AO on the footing that in mercantile system of accounting followed by the assessee, income accrues when the assessee acquires the right to receive it, and in the accounting year under consideration, the enforceable price was the one fixed by the High Court. The assessee did not file appeal. Action under Section 147(b) was also taken by the AO for earlier years to bring to tax such excess realisation, since, at the time of original assessment, the assessee had failed to disclose the fact that the sales credited to the trading account did not include the sums realised as a result of higher price fixed for levy sugar by High Court.

7.3.3 Sales and Profiteering

i. Even after the introduction of controls in a rising market, first in July, 1959 (removed on 27th Sept. 1961) and then on 17th April, 1963 and 12th Sept., 1979, there was black marketing of sugar on account of a large demand and short supply. Even under the scheme of partial control, which was in operation since 1967 except for a brief period in 1978 and 1979, there has been a lot of profiteering in respect of free sale sugar, depending on the demand and shortage in supply. The mills as well as the whole-sellers very often resort to various ways for concealing their extra income from the high price charged in respect of free sale sugar. Sometimes, sugar mills earn extra

profits by charging 'on money' on sugar sales direct from the purchasers. At other times, they introduce their employees or some other relations as benamidars, who act as bogus intermediaries between the mills and the real purchasers. In times of control, the sales are shown to have been made to such bogus intermediaries at controlled rates and when there is partial control or decontrol, the sales are shown at a price, which is below the actual price in the market. It is very difficult to establish the receipt of 'on money' because at the time the transaction is entered the manufacturers and the wholesalers take all the necessary precautions. However, the 'on money' charged on sales, is likely to be introduced in the accounts of mills in the form of cash deposits. Such deposits, therefore, need thorough investigation. The bulk of the 'on money' charged by the mill normally goes to the managing agents, managing directors or other persons in charge of the management of the company. The AOs should therefore be vigilant. They should make a thorough probe into their affairs at the time of making their assessments.

ii. One of the co-operative sugar mills in North India earned huge profits on account of better yield in a particular year. The management, however, decided to suppress the profits. The Management suo-moto increased the purchase price of sugarcane after the close of the accounting period. This enhanced purchase price was shown in the Balance Sheet as outstanding to farmers. A fraction of this amount was paid to farmers. This was detected by the AO who added the amount being not due to the farmers. The Appellate authorities upheld the addition.

7.4 By-products: Bagasse is mainly consumed in the mills as a substitute for firewood. However, wherever the bagasse is sold, it should be seen whether proper records of receipts and issues and balances both in quantity and value have been kept as a pre requirement of Cost Accounting Records (Sugar) Rules, 2011. In factories employing sulphitation process, press cake is used as manure and so similar records should be kept in respect of press cake in such factories. In respect of molasses, the AO should verify whether proper record has been kept tank wise and whether draining out of molasses is authenticated. The Controller of molasses allocates the molasses produced to distilleries and some other industrial units. If molasses remain unlifted in open tanks, the brie and total sugar contents deterioriate, and molasses become unfit for distillation and other purposes. In rare cases, the Excise authorities allow the sugar mills to drain out such stock to make space for storage of new stock. Sometimes it may happen that some stock of molasses is shown by the sugar mills as drained out, but it is not actually drained out and such molasses is sold to dealers outside the books of accounts. In one case, the assessee claimed that about 40% of the closing stock of molasses was drained out and hence the same was claimed as wastage. The assessee filed a copy of Inspector's note from the Excise Officer (Molasses), which showed that two out of five tanks were drained out at certain points of time in terms of the order of the Excise Officer (Molasses). The AO checked the entries in the Molasses register, pertaining to these two storage tanks. He noted that the date on which the stock in the two tanks was certified by the excise authorities as unfit on the ground of brie and sugar content being below certain figures, the entries were found to be wrong, with reference to the registers kept by the assessee. On these facts, the AO held that the assessee has been manipulating the records in collusion with local excise officials and rejected the claim regarding the stock of molasses having been drained out, in entirety. In this case, some of the material found at the time of a search and the statement of employee recorded at that time, corroborated that the stock of molasses shown as drained out, was in fact sold to dealers outside the books of accounts.

7.5 Ethanol is allowed to be produced from sugarcane juice and intermediate molasses. As per National Sugar Institute, Kanpur, ethanol yield arrives at 296.8 litres per ton and 235.5 litres per ton for B Heavy molasses and Final molasses respectively. In trial done at Dhampur Distillery, the yield arrives at 281.8 litre per ton and 225 litre per ton for B Heavy molasses and Final molasses respectively. Therefore, the AO is required to check quantative details of consumption of molasses for ethanol production. The Oil Marketing Companies (OMC) are to procure ethanol from domestic sources. Government has notified administered price of ethanol since the year 2014. For the previous ethanol supply year 2018–19, the ethanol procurement by OMCs is estimated to be 200 Crore litres. For ethanol supply year 2019–20 (i.e. 1st December 2019 to 30th November 2020), the government has fixed remunerative price for ethanol procurement based on raw material utilised for ethanol production as follows:

i. From C–heavy molasses at Rs. 43.75 per litre.

ii. From B–heavy molasses/ partial sugarcane juice/ sugar/ sugar syrup route be fixed at Rs. 59.48 per litre.

iii. Additionally, GST and transportation charges will also be payable. OMCs have been also advised to fix realistic transportation charges so that long distance transportation of ethanol is not dis-incentivised.

Government has reduced the GST rate on ethanol meant for Ethanol Blending Programme (EBP) from 18% to 5%.

The AO is also required to look into consumption of molasses, production of ethanol as well as supply of ethanol to OMCs quatity-wise.

7.6 Closing Stock: The valuation of closing stock should be examined in the same manner in which it is examined in other manufacturing concerns. The special feature in respect of sugar mills is that Excise duty is payable on sugar when it is despatched from the factory. If the basis of valuation is the market rate, then the correct method will be the market value of stock less the Excise duty payable on the quantity of stock. It may be that some concerns might value part of closing stock at lesser rate on the ground that it is damaged. In that case the AO has to see the sale in the subsequent years to verify the explanation from the registers maintained for GST as specific entries in regard to the damaged sugar is to be made therein. Sometimes the sugar mills value the work-in-progress and finished goods on cost basis. In such cases the cost records may be looked into to find out the cost elements of the sugar that have been taken into account. In one case the cost basis was followed by reducing certain percentage from the market price, which was worked on the basis of sales. This sort of valuation can not be resorted to while valuing the stock on cost basis. The Cost Accounting Records(Sugar) Rules, 2011 stipulate that the method followed for the cost of work-in-progress and finished goods stock should be indicated in the cost records, clearly mentioning the cost elements that have been taken into account in such computation. The Rules do not state that these items should be cost accounted in a definite manner. On the other hand, there may be certain flexibility but this flexibility can not be extended to allow the working of cost, which is arrived at by making some percentage deduction from the market price. Whatever is the method of valuation of closing stock, the same should be consistently followed. In one case, the assessee was valuing the free sale sugar on the market price, but in one particular year, it was valued on cost basis. The stock was revalued on market price and the resultant difference was added to the income.

7.7 Interest Payable Pertaining to Additional Sale Price Realised: Another item, which has featured in recent years, is the interest payable on bank guarantees given to the courts for refund of the extra price realised

on sale of levy sugar. Most sugar factories have been realising, some additional sale price, in respect of levy sugar, over and above the price fixed by the Government. Disputes arise between the factories and the parties, which are taken to the courts. Where the disputes have been settled in the court, the sugar mills are required not only to refund the additional sale price realised, but also to pay interest in terms of the orders of the courts. It is to be ensured that the liability for interest is allowed as deduction in the year in which it becomes an ascertained liability in the terms of court's order. In some cases, interest is debited to the Profit and loss account, including the interest charged by the assessee in its books in respect of additional sale price realised which is credited to the account of levy sugar equalisation fund. In one case, while allowing fixation of additional interim price for levy sugar, the High Court directed that in case the assessee failed in its plea for a higher price for levy sugar, the difference should be refunded along with interest at the rate of 12.5%. Since at the time of finalisation of relevant assessment, the issue was pending before Supreme Court on a reference made by the Government, the AO took the view that the case having not been disposed of, no liability towards interest could be said to have accrued or arisen during the year and accordingly the claim for deduction of such interest was disallowed. However, in the event of the assessee finally losing the case for additional price of levy sugar and becoming liable to refund the excess amount alongwith interest, the claim for deduction of interest may have to be accepted in the year of final decision by Supreme Court.

7.8 Overstatement of Expenses

7.8.1 Gunny Bags and other Packing Material are required in packing and selling the sugar. The packing material by an Agent is purchased at higher rates than the prevailing market rate. In this regard the rates of various packing material including gunny bags as quoted in the various Economic Journals should be compared with the purchase price shown by the Sugar Mills. Similarly the relationship between management and suppliers should also be looked into. In cases where the gunny bags have been purchased through an agent, there is higher possibility of over statement of the price. In fact, the overstated or excess purchase price paid to the suppliers is received back by the management as their unaccounted income.

7.8.2 Lubricants and Diesel etc. are used in a large quantity and are required by the sugar mills for various operations. The quantities and account of these purchases should be compared with the preceding year's consumption. Also the quantities purchased during the various period should be compared with the seasonal requirements of these items. Quite often huge quantities of these items are purchased at the fag end of the financial year and also shown as consumed. The average consumption per month/ fortnight etc. should be worked out and it should be seen whether the quantity purchased during the fag end has been really consumed. In case they could not have consumed it naturally the conclusion will be that only bills have been produced and payments have been siphoned off by the management. It may be quite possible that suppliers may not have any ready stock of those lubricants and oils etc., when the purchases have been shown.

7.8.3 Repairs & Maintenance: Sugar production is a seasonal industry. During the season the industry runs 24 hours as the production is a continuous process. The season may last from November to May and therefore after the season all the sugar mills go for large-scale repairs and maintenance schedule. The details of various items/ parts purchased for repair and maintenance should be analysed critically. Wear and tear normally occurs in respect of bearings, taps, valves, etc. Other major repairs on account of motors, gears, pipes and containers are occasionally repaired, but quite often the management obtains bills from the suppliers whereas no replacement of a particular item is done. For instance, replacement of gears

and rollers are shown on a large scale. These are very heavy items and if they have been replaced, the scrap value obtained should also be scrutinised. However, neither the scrap value is shown nor these items are shown in the closing stock. Physical verification even after one or two years may give results in this regard. It needs to be emphasised that where bogus purchases have been shown in these items, there may not be proper transport documents, installation bills, trial details etc.

7.8.4 Inflation of Purchase Price of Cane: In addition to inflation of the quantity of sugarcane consumed there is a possibility of inflating the purchase price of sugarcane. The possibility of inflating the purchase price of sugarcane exists in respect of direct supply of crushed cane purchased from sugarcane growers as well purchases made through Co-operative Societies. Even though the minimum price for the purchase of cane is fixed for a particular year, the factory owner may claim that the price paid for the cane crushed is higher than the minimum rate fixed by the Government which is generally justified on grounds of a higher recovery percentage of sugarcane. The AO should verify the actual recovery percentage of sugar in the factory and if it is low, there may be reason to suspect that sugarcane of low quality has been purchased. In one case, enquiries were made directly from the farmers who were said to have supplied the cane at a price higher than the minimum but the statement of the farmers did not corroborate the purchase price shown. Where a sugar factory owns a sugarcane farm, an attempt might be made to inflate the purchase price of sugarcane produced at the farm. Rule 7 of the I.T. Rules, 1962 provides that the price of the sugarcane debited in the books should be at the market rate. In one case, the company having a large sugar factory, owned a sugarcane farm. It debited the purchase price of its own cane at a much higher rate as compared to the rate for the best variety of sugarcane available in the locality. The result was that the company showed an artificially inflated non-taxable income on agricultural operations and thereby reduced the taxable income.

7.8.5 Loading and Unloading Expenses: Inflation of loading and unloading expenses is another method of reducing the trading profits. When the cane is purchased at the outstation centres, the same is to be transported to the factory site. The factories usually deal with two sets of contractors–one for loading and unloading and the other for transport from the purchasing centres to the factory site-and written agreements are entered into with the contractors. For, unloading cane from farmer's carts and then loading them into trucks, written agreements are entered with the contractors. No hard and fast rules can be laid down for loading, unloading and stocking. This will depend upon the local labour conditions and availability of adequate work at the purchasing centre to keep the labour fully employed. These things have to be kept in mind by the AO to judge the reasonableness of the charges. Further, the rates paid in the past as well as the rates paid by other mills in the neighbouring areas should also be considered in this regard. In one case the factory submitted an excess claim for loading and unloading charges. The factory did not produce written contracts with some of the loading contractors, although these were specially called for. The AO noticed that the charges paid were much higher than the rates at which other mills of the area were making payments for similar work. Some parties in respect of whom original agreements were filed, were called and examined. One of the contractors admitted before the AO that out of payments received by him from the Mill for loading and unloading, he used to part with certain amounts which were given back to the assessee. Another contractor who was examined, gave valuable information regarding the fact that the assessee had been regularly inflating the loading and unloading expenses. When some vouchers were shown, he denied that they bore his signature. He admitted that the actual amount paid to him

was only 50% of the contract rate. On these facts, a part of the loading and unloading expenses were disallowed. Sometimes the transport contractor is made responsible for shortages on the weighment at the factory site. In such cases the contract rates are to be slightly higher. Care should be taken to see that no transport charges are claimed in respect of cane supplied directly at the factory gate.

7.8.6 Consumption of Power, Fuel and Process Store: The expenses under these heads are debited to the trading account. These should be compared with earlier year's expenses and wherever these appear to be excessive, it should be checked whether proper records have been maintained to show the receipts both in quantity and cost.

7.8.6.1 Coal and Firewood: For running the boiler, bagasse is used as firewood. Normally the bagasse is sufficient to meet the fuel requirements in the case of the mill but in certain cases coal and firewood have to be utilised in addition to bagasse as they are substitutes for bagasse. It is necessary for the Assessing Officer to look into the comparative figures of consumption of bagasse, coal and firewood in production of sugar for the previous years as well as the years under consideration. He can also look into the comparative figures of various sugar mills located in the same region. If consumption claimed is excessive, then the claim has to be examined in detail. Although the bagasse is normally sufficient to meet the fuel requirements in the case of mills with large capacity and constant supply of cane, Coal/ fire wood may be required during off-season (when the boiler may be required to run for some maintenance operations) or for a few days at the start of the season or when there may be temporary stoppage in the crushing of cane. The claim of coal and firewood should therefore be examined keeping this aspect in view. The position however, will be different if the entire or substantial quantity of bagasse is sold to some other sister concern or to some outside agency for the manufacture of strawboard, etc. The quantity of coal and firewood is generally worked out as a percentage of cane crushed and then compared with similar figures of the preceding years. The normal requirement of firewood for firing boilers in the beginning of the season varies from three thousand to five thousand maunds. It may so happen that sometimes there may not be any increase in the consumption of one item compared to the last year and there is lesser consumption of some other items. In order to have an idea of overall consumption it may be kept in mind that the ratio of consumption of coal to bagasse is 1:3 and firewood to bagasse is 1:2. In certain cases coal and firewood are supplied free to the staff and also used in the guest house. In view of this, the issue of these items should be scrutinised thoroughly.

7.8.6.2 Bagasse: After the juice has been fully extracted, the bagasse automatically moves into a furnace on a revolving conveyor belt. However, it is possible to lift bagasse from the belt and sell it to the parties concerned for manufacture of cardboard, glass etc. In view of this, the assessee's plea that the whole of the bagasse stood consumed for manufacture of sugar should be critically examined.

7.8.6.3 Lime and Lime Stone: This is used for purification of sugar. In the carbonation plant, this requirement is more as compared to the Sulphitation plant. Sometimes the company straight away buys lime from outside and sometimes buys limestone and converts it into lime. For conversion of limestone into lime the small pieces of limestone and coal are put together into the furnace and with the heat and water, it converts into lime. During the process of conversion, certain pieces of big limestone do not melt and they have to be reprocessed for conversion. At the same time certain very small pieces of lime stone also remain undissolved but these cannot be put into the furnace again and they are kept apart and sold to various contractors for construction of buildings, etc. Generally such sales are not shown in the books. Therefore, during investigation this point has to be kept in mind.

7.8.6.4 Sulphur: Consumption of sulphur should also be compared with the previous years and its ratio to production should also be compared. Comparison should be made with other factories, but it should be ensured that the comparison is with a factory using the same process.

7.8.6.5 Diesel Oil or Crude Oil: Under this head consumption of two items is claimed i.e. diesel oil and crude oil. High-speed diesel oil and crude oil are used for running the engines which are used to generate electricity. The assessee sometimes claims that due to power shortage they had to run generators for the production of electricity. This claim has to be critically examined. Sometimes the electricity is supplied to the staff residing in the locality and also for the repairs to the machinery etc. The staff of the mill normally stays in the compound of the mills and it is not unlikely that in some cases the electricity may be supplied from the mill. In case, any amount is charged from the staff for providing electricity, it is to be seen whether this payment is accounted for or not. If there is no decrease in electricity expenses during the month in which such consumption of diesel oil is claimed, it should be ascertained for which purpose the oil has been consumed. It could be that, there has been some manufacture of machinery in the mill in such a period and in that case the expenditure has to be capitalised.

7.8.6.6 Filter Cloth: Like other items consumption of this item has to be compared with the previous years. In addition to the filter clothes, the mills also use a rough cloth known as 'hessien cloth' to support the filter cloth. It has to be kept in mind that the consumption of filter cloth may vary a little according to the purity of juice but not much.

7.8.6.7 Lubricants: The month-wise consumption of lubricants and its ratio with production can throw light on the genuineness of the expenses. However, it may be mentioned that the lubricants are used in off-season also. In season, they are used for running various machines, turbines and engines. In off-season, they are used for running the workshop machine. The use of lubricants is more at the start of the factory operations and lesser during running of the factory, as at the beginning of the season, the oil has to be filled in chambers of various machines.

7.8.6.8 Electricity Expenses: The units of electricity consumed can be verified from the records of the factory and from the electricity department of that area. The expenses of electricity are more during the season and they are less during off-season. During off-season, the electricity may sometimes be consumed in the workshop for manufacturing of machines and excessive expenses may relate to an item of new machinery, which may be claimed as revenue expenditure. The excess on account of electricity charges will however correspondingly reduce the expenses on diesel oil. As such, the expenses on diesel oil may be kept in mind while critically examining the electricity expenses.

7.9 In brief, no hard and fast guidelines for investigation of the cases of sugar mills can be devised. Every sugar mill is located in a specific area having its own advantages and disadvantages. Therefore, each case has to be tackled in its own way. Still some broad principles can be summarised below-

7.9.1 The yield of sugar and other by-products i.e. molasses, Bagasse, etc. may be compared with the assessees own results declared in the preceding years. The yields may further be compared for different months as the yield varies from month to month during a season. The sugar yield is less in the beginning of a season, it goes up gradually and then it decreases at the end of the season.

7.9.2 The sale price of different products should be ascertained from the market during different months of the accounting period and compared with the assessee's results carefully.

7.9.3 Commission paid to selling agents and other persons may be compared with the preceding years and also with the commission paid by other sugar mills located in the nearby areas.

7.9.4 The purchase price of various consumable including gunny bags, grease, lubricants, diesel, oil, coal, fuel etc. should be compared with the prevailing market rates and appropriate enquiries and investigations should be carried out when the variations are more than the acceptable limit. The quantities purchased, used and remaining in the closing stock may be verified.

7.9.5 The expenses incurred on repairs and replacement of the plant & machinery during the off season should be examined critically. Purchase of important items should invariably be cross checked from the suppliers. There are market information about large scale inflation of expenses in this area, therefore, not only the cost of the items should be verified from the suppliers but also the cost may be verified from the manufacturers of similar items.

7.9.6 The closing stock of various materials should invariably be checked and verified from the Banks and Excise Authorities.

7.9.7 Many perquisites specially free/ concessional residential accommodation free/ concessional electricity, telephone, transportation, chowkidar, mali etc. are provided by various sugar mills to their employees. It has been observed that either no tax is deducted at source in respect of these perquisites on the above items or the same is deducted at a very concessional/ nominal rate. The AOs are advised to obtain the details of perquisites provided to the employees and work out the value in accordance with the Income-tax Rules and pass on this information to the AO dealing with TDS matters of that sugar mill.

7.9.8 The APMC market wise, commodity wise price of Agricultural commodities including Sugar cane is readily available at http:/agmarket.gov.in. This data is available on daily basis. From the above mentioned website, the AO can easily get the market rate of Sugar Cane at APMC of the area where the sugar factory is situated and can then compare the rate with the rate stated or claimed by assessee. Generally, the price provided by broker or factory owner is slightly lower from the rate offered by APMC as farmers have to prove that it has actually paid the higher rates as claimed by it. Further, the AO can also disallow the difference of higher prices claimed by the assessee by comparing the rates shown in the books with the highest rate as prevailing in the APMC.

8. CONCLUSION

This article unravels various aspect of manufacturing processes involved in Sugar and Molasses. The manufacturing process also results into various by-products too. The AO should examine the yield of such by-products which in turn will give him/ her a clue as to the actual production of main products such as Sugar and Molasses.

CHAPTER 17

Tea Industry

1. INTRODUCTION

1.1 The word "tea" comes from the Chinese dialect word "te" pronounced "tay". In Cantonese, the character becomes "cha" pronounced "chah". In this form, it travelled to India, Iran and Russia as well as to Japan. The English adopted the word and changed the pronunciation to "tea".

1.2 The history of tea in India dates back to 1774 when the first consignment arrived from China. However, commercial plantation began only in 1830s. The tea estates in the earlier days were predominantly owned by the British who raised funds from the London markets. After independence, the ownership gradually passed into the hands of Indian business houses. Since 1947, the total area under tea plantation has increased by around 40% while production has galloped by more than 250%.

1.3 Tea is a popular drink whose demand is relatively insensitive to price. However, being an agricultural commodity, its supply is sensitive to weather conditions. Tea plantation and production are highly labour intensive. Labour cost accounts for around 60% of the total cost of production. Tea bushes begin to yield leaves after 5–7 years and have a life span of about 150 years. This implies that return on new investment is low and is spread over a long period.

1.4 The world production of tea is concentrated in a few countries like China, India, Kenya, Sri Lanka, Vietnam and Indonesia. In 2016, these six countries accounted for about 85% of the total world production of tea. They also accounted for nearly 85% of the total tea exports. The import markets are mainly in developed countries, though with increasing consumption in developing countries, there is a gradual shift of import markets to developing countries.

1.5 The average per head consumption of tea varies widely from country to country. In 2016, the consumption was highest in Turkey (3.02 kg), Afghanistan (2.20 kg) and was around 2 kgs in United Kingdom, Libya, Morocco, Qatar, Taiwan and Ireland. The consumption was around 1 kg in Hong Kong, Sri Lanka, Egypt, Chile, Iraq, China, New Zealand and Iran while in India, it was around 800 grams.

2. PLANTATION AND PROCESSING

Botanically, tea is a tree. For commercial farming, tea is grown as a bonsai, by repeated pruning and clipping. Tea bushes get ready for commercial plucking in 5 years and take about 7 years to reach maturity. Their life span is over 100 years. Productivity is high in the first 30–50 years. The processing of tea leaves involves crushing of leaves, which leads to controlled fermentation of the present liquor. The processed tea (referred to as "made tea" in the industry) is sold either in loose form or in packets.

3. TYPES & QUALITY

3.1 Tea is distinguished as *Black or Green* based on apparent colour. While black tea is manufactured by deliberate fermentation of leaf juice, green tea is manufactured by preventing fermentation. Black tea has a stronger taste and liquor. Green tea is light and is perceived to have pharmaceutical properties. Black tea can be of two varieties – *Leaf* or *Dust***.** Leaf tea can also be processed as *orthodox* or *CTC* (*Crush, Tear and Curl*). CTC production entails accelerated fermentation. CTC gives higher cuppage (almost twice) for the same quantity of tea and has a stronger liquor, while orthodox tea is light and retains an aroma. Tea quality is measured on the basis of liquor, aroma/ flavour and leaf appearance. Consumers perceive quality differences on the attributes of taste, pungency, strength, freshness, colour and packaging.

3.2 Value Addition: The most popular form of value addition is selling branded tea. This involves not only the packing of tea but also blending of other varieties to maintain consistency of taste. To arrive at a blend, expert tea tasters sample hundreds of liquors. Convenient drinks like instant tea (soluble tea powder), tea bags (bags are dipped in hot water), ready to drink (served in cans) and flavored tea (with vanilla, strawberry flavor) are becoming popular in developed countries like the USA and Japan.

4. INDUSTRY CHARACTERISTICS

4.1 Productivity and Quality: The art of plucking, fine-tuned over the last 200 years, requires two fresh leaves and a bud to be plucked manually. Tea productivity can be measured in terms of per unit of labour (man-year) and per unit of land (hectare). Mechanized plucking enhances productivity, but with compromise on quality, coarse leaves also get plucked. When tea is in short supply, some producers increase productivity by allowing plucking of coarse leaves with fresh ones. The productivity also depends on the age of tea bushes, genetic material, irrigation, fertilizer, cultivation techniques, etc. Replantation is also done to replace old bushes to improve productivity.

4.2 Labour-Intensive: Tea industry is very labour intensive. The proportion of variable elements in labour cost depends on labour legislation and extent of casual and temporary workers employed.

4.3 Long Gestation: Tea bushes mature for commercial exploitation in 5–7 years and remain productive for over 100 years. Major part of capital expenditure is to be incurred in first five years, which then yields return over the next 100 years.

4.4 Commodity Nature: Tea prices fluctuate widely with demand supply imbalances. The commodity is perishable and its demand is relatively inelastic to price. While demand has a secular growth rate, supply can vary depending on climatic conditions in the major tea growing countries. Unlike other commodities, tea price cycles have no linkage with the general economic cycles, but depend on agro-climatic conditions.

4.5 Organized Industry: Tea industry is an organized agro-industry. This implies that labour law exists and since the dominant mode of tea trade is through auctions, a large number of small producers get fair prices.

5. GLOBAL SCENARIO

5.1 More than 36 countries spread over all the continents (except North America) with wide range of agro-climatic conditions between 41'N (Georgia) and 35'S latitude (Argentina) grow tea. The global production of tea has been increasing steadily, doubling in the 20 years' period from 2,525 million metric tons (MT) in 1995 to 5,305 million metric tons (5.3 billion kilos) in 2015. While tea is grown commercially in more than 35 countries, production remains concentrated in a few with the top seven producers accounting for 90% of the total global production and the top 10 growing 94% of the world's tea. The major tea producing and exporting countries are China, India, Kenya and Sri Lanka and they account for about 80% and 73% of the world production and exports respectively. China and India ranked as the largest and second largest, respectively, in tea production. Together, they account for more than 65% of the world's tea production. Other countries like Kenya, Sri Lanka, Vietnam and Indonesia produce only about 20% of world tea but control more than 50% of the global trade.

Table 1: Share of Major Tea Producing Countries in Production

Country	China	India	Kenya	Sri Lanka	Vietnam	Indonesia	Others
2013	38.5%	24.0%	8.7%	6.8%	3.6%	2.7%	15.7%
2014	40.3%	23.2%	8.6%	6.5%	3.4%	2.6%	15.4%
2015	42.7%	22.9%	7.5%	6.2%	3.2%	2.4%	15.1
2016	43.0%	22.7%	8.7%	5.4%	3.0%	2.3%	14.9%

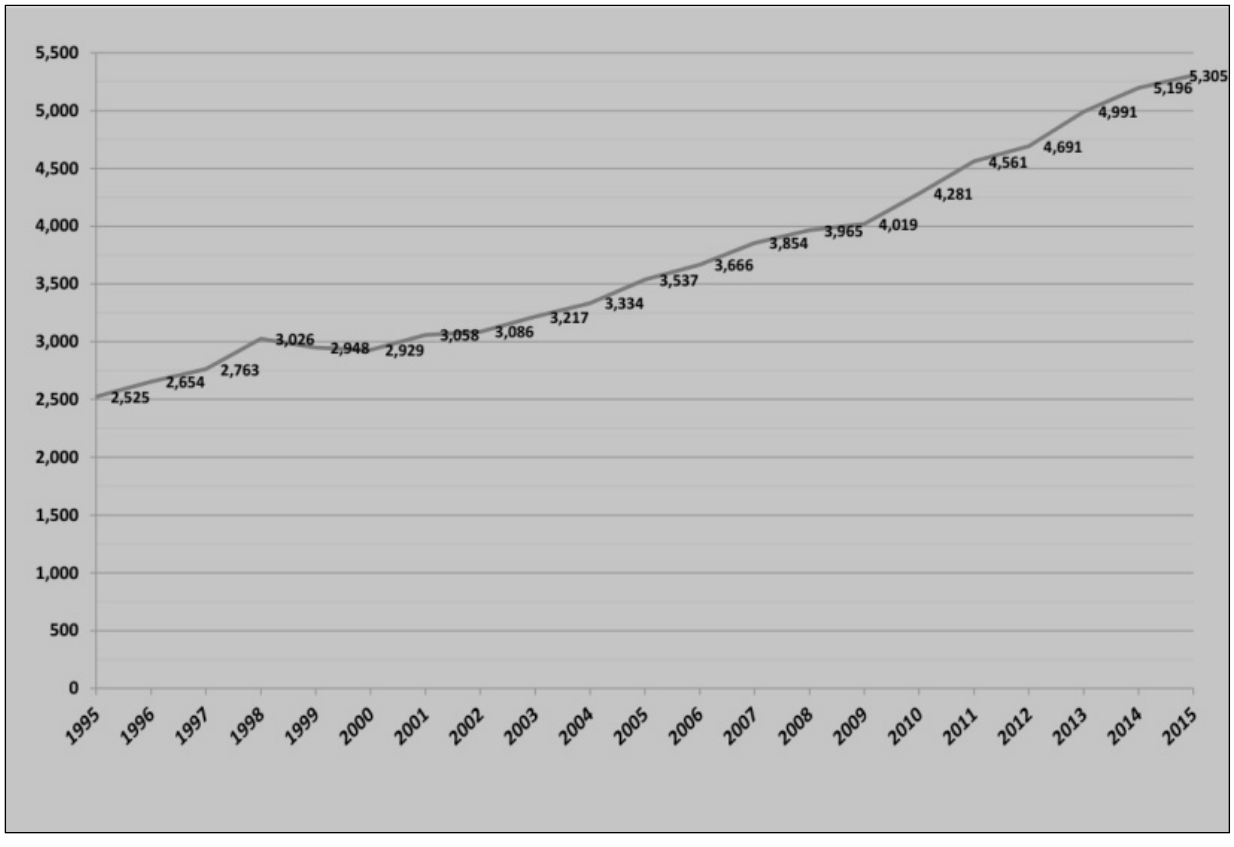


Fig. 1: Global Production Growth 1995–2015 (In M.kgs.)

Source: ITC Annual Bulletin of Statistics 2017

Table 2: Share of Major Tea Exporting Nations in World Trade

Year	Kenya	China	Sri Lanka	India	Vietnam	Indonesia	Others
2013	26.6%	17.9%	16.6%	11.8%	7.5%	3.8%	15.8%
2014	27.4%	16.5%	17.4%	11.4%	7.2%	3.6%	16.5%
2015	24.7%	18.0%	16.8%	12.7%	7.4%	3.4%	17.0%
2016	27.0%	18.5%	15.8%	12.2%	7.1%	2.8%	16.6%

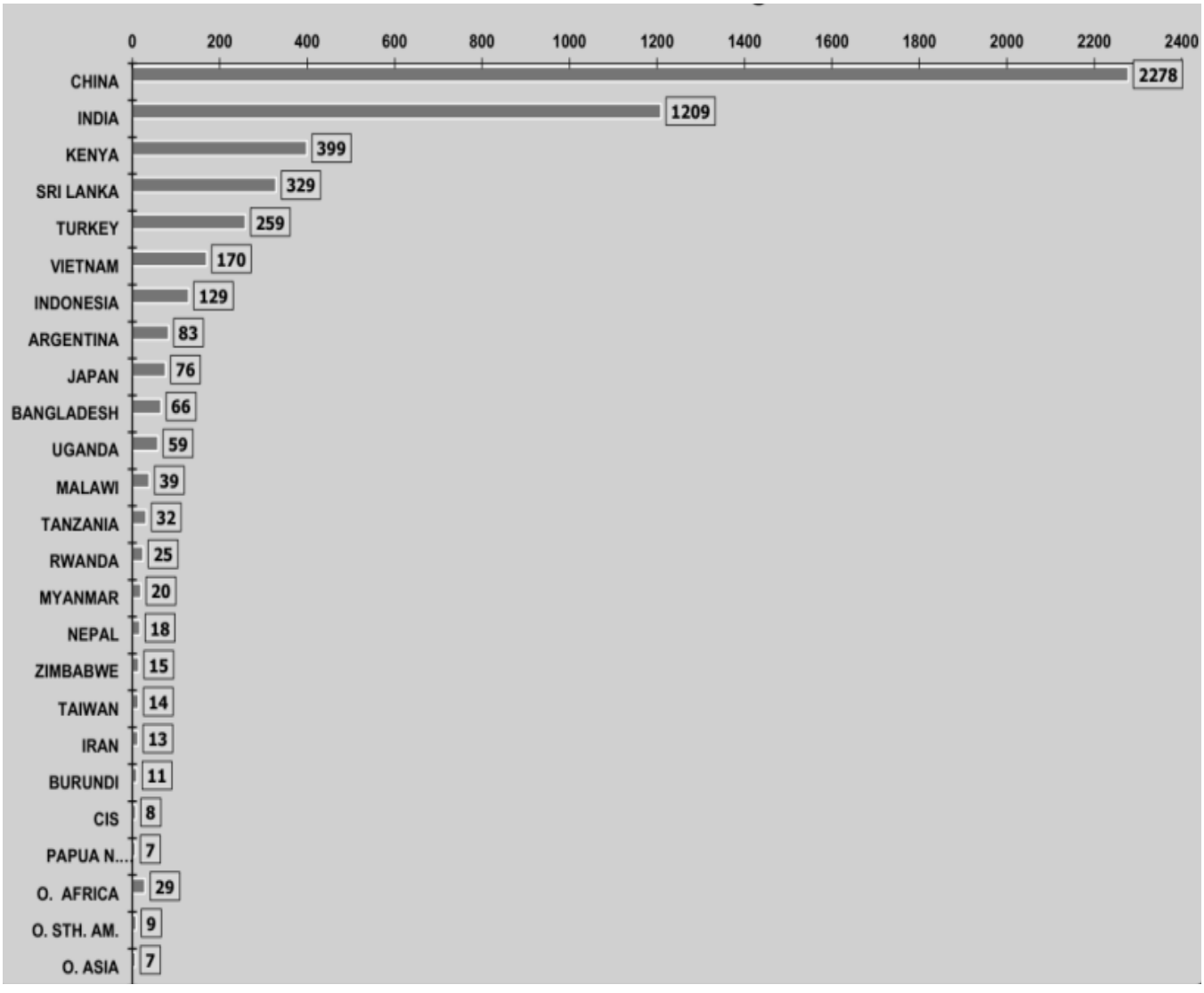


Fig. 2: World Production of Tea 2015 Million kg

5.2 The total global tea export was 1805 million kilos as against total production of 5305 million kilos. Kenya, China, Sri Lanka and India accounted for 25%, 18%, 17% and 13% respectively of the global tea exports in 2015. With a billion plus population, India consumes about 75% of its total produce. Thus, it has very little amount of surplus tea left for export.

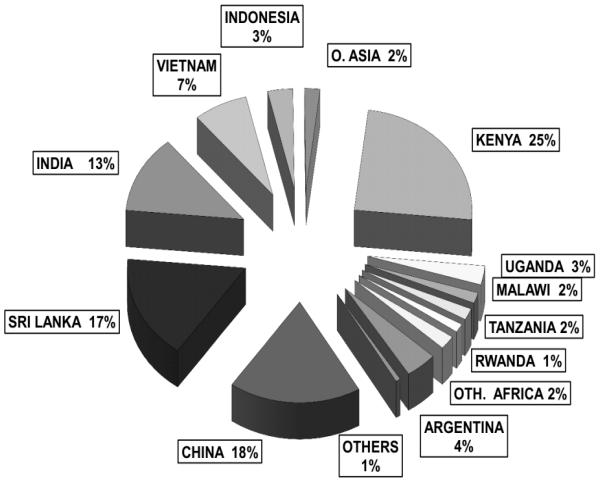


Fig. 3: World Exports of Tea (Total-1,801 M kg

Source: ITC Annual Bulletin of Statistics 2017

6. TEA CONSUMING NATIONS

6.1 Tea is the second most consumed drink in the world, after water. Data from the U.N. Food and Agriculture Organisation suggests that the world drinks about six billion cups of tea a day. The world consumed 2.9 million tonnes of tea in 2016, up from 1.6 million tonnes in 2002. Global consumption of tea is forecast to reach 3.3 million tonnes in 2021.

6.2 The top three markets for tea by per capita consumption are Turkey, Ireland and United Kingdom. The top three markets for tea consumption by volume are China, India and Pakistan. Historically, tea consumption has been very high in the UK and Ireland. Tea popularity has been growing rapidly in developing countries like India, China, Pakistan and the Middle Eastern countries. Major instant tea consumers are USA and West Europe. The largest importers of tea in the world are Russia, Pakistan and USA. China, Hong Kong and Taiwan are the world's biggest consumers of Green Tea.

7. INDIAN SCENARIO

7.1 In India tea plantations were started in the middle of 19th century under British management. Commercial tea cultivation in India was driven by the British who consumed tea in enormous quantities, which they bought from China. By 1750, they were purchasing millions of pounds worth of tea every year from China. Even though the British managed to counterbalance it with opium trade to some extent, they found that their tea consumption was exorbitantly expensive and unsustainable. This realisation led to a sustained effort by the British to understand tea production–and start tea cultivation in India.

7.2 As in end of 2017, India is the second largest producer and consumer of tea in the world after China. It is also a leading player in global R&D and is a leading manufacturer and exporter of tea machinery. Major tea producers source equipment and technology from India.

7.3 The annual per capita consumption in India is low at 800 gm (in 2016) as compared to other countries like in Turkey(3.02 kg), Afghanistan, United Kingdom, Libya, Morocco, Qatar, Taiwan and Ireland. Even though per capita consumption of tea is lower in India as compared to other countries due to its population, the tea consumption in India accounts for 19% of the global consumption. Almost 76% of the total production is consumed within the country. This distinct position is in sharp contrast with other producing countries, particularly Kenya and Sri Lanka, which hardly have any strong domestic demand and hence are able to export most of their production

7.4 Tea production in India has risen to 1267 million kg in 2016 from around 780 million kg in 1996. The total area under tea production in 2016–17 is approx. 577,480 hectares of which 476,660 hectares are in North India and 100,820 hectares in South India.

Table 3: India-Tea Statistics

Year	Area	Production	Yield	Exports		Price
	000 Hectares	Million kg	kg/Hectare	Million kg	Million Rs	Rs/ kg
2012–13	563.98	1135.07	2012.61	216.23	40059.3	127.91
2013–14	563.98	1208.78	2143.30	225.76	45090.9	126.12
2014–15	566.66	1197.18	2112.70	199.08	38236.4	125.59
2015–16	566.66	1233.14	2176.15	232.92	44931.0	127.62
2016–17	577.48	1250.49	2165.43	227.63	46325.0	133.51

Source: Tea Board India

7.5 Regional Variations

7.5.1 In India, tea is cultivated in 15 states of which Assam, West Bengal, Tamil Nadu and Kerala are the major tea growing states. These four states account for 97% of the total production of tea in India. Other traditional states where tea is grown are Tripura, Himachal Pradesh, Uttarakhand, Bihar and Karnataka. The non-traditional states that have entered the tea map of India include Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Sikkim.

7.5.2 World's finest teas like Darjeeling, Assam, Nilgiris and Kangra which are famous for their delicate flavor, strength and brightness are produced in India. With diverse agro climatic conditions, India produces a medley of tea suited to different tastes and preferences of consumers. The characteristics of each region are distinct, which sets them apart from one another in many ways.

7.5.3 The main tea-growing regions are in North East India (mainly Assam) and in north Bengal (Darjeeling district and the Dooars region). These two regions account for more than 80% of the total tea production in India. Tea is also grown on a large scale in the Nilgiris in South India. The tea growing areas in India during 2016–17 are as follows:

Table 4

State/ Region	Area (000 Hectares)	Salient Features
Assam	282.05	Assam tea is grown here. More than 50% of Indian tea crop is produced here.
West Bengal	142.09	The high-quality Darjeeling tea is grown in this State.
Other NI states	52.53	
Total North India	476.67	
Tamil Nadu	69.62	The Nilgiris, famous for high-quality tea, are located in Tamil Nadu. Annamalais tea is also grown here.
Kerala	36.18	Wayanad tea, Munnar tea and Travancore tea are grown here.
Karnataka	2.22	Tea plantations are mostly located around Chikmagalur, which is located in the Baba Budan Hills of the Sahyadris range.
Total South India	108.02	
Total India	584.69	

The state-wise production of Indian tea during 2016–17 is given below:

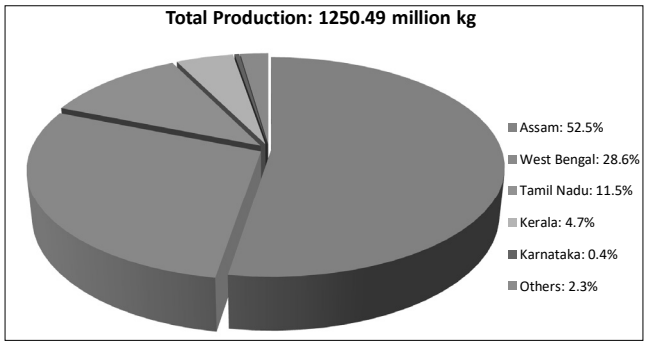


Fig. 4: Productgion of Tea in India During 2016–17

Source: Tea Board India

8. TEA PROCESSING

8.1 The art of quality tea plucking requires plucking two fresh leaves and a bud. In coarse plucking, 5 or more leaves apart from the bud are plucked. Plucking being a labour intensive operation, accounts for about one-fourth of the total cost of sales. Besides this, a tea garden requires continual weeding and pruning. The plucked leaves are weighed and transported to the factory, where the leaves are withered, rolled, fermented and dried.

8.2 Black Tea is the most widely consumed of all the teas. In the global tea market, the major production is of black tea, which comprises about two-thirds of the global production. In black tea making, oxidation and condensation of tea catechins or tannins is affected to attain optimum fermentation.

8.3 Orthodox and CTC are basically the two major styles of tea production. The tea leaves produced by these methods are being given their respective names after their production styles. Orthodox tea refers to loose leaf tea produced using traditional (orthodox) methods, which involves plucking, withering, rolling, oxidation/ fermentation and drying. CTC (Crush, Tear and Curl or Cut, Tear and Curl) is a method of processing black tea where tea leaves are passed through a series of cylindrical rollers with serrated blades that crush, tear, and curl the tea into small, even-shaped pellets.

8.4 Post-Processing Activities: Bulk tea is packed in tea chests of standard sizes or gunny bags with poly liners or paper sacks (which is very sparingly used in India but is commonly used in Africa). After packing it is grade-named, invoiced and stenciled, and transported from tea gardens to registered warehouses. The producers, buyers, and brokers have to be registered with the auction centre(s). In addition, a broker needs a license from the Tea Board India-the apex tea body in India.

9. TYPES OF TEA

9.1 Different types of tea and their processing methods are briefly discussed below.

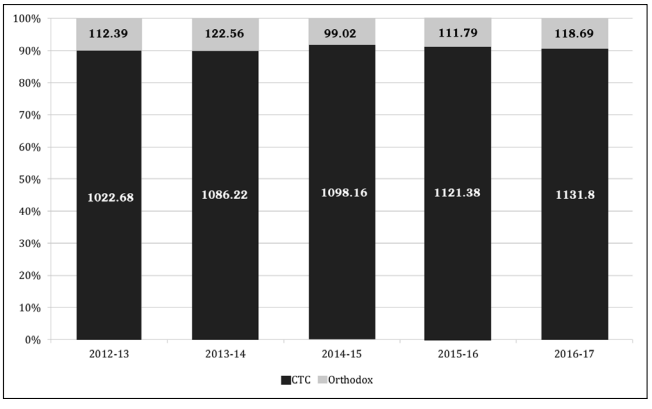


Fig. 5: All-India Category-wise Production of Tea in India

Table 5

Type of Tea	Black Tea		Green Tea
	Orthodox	**CTC (crush, tear & curl)**	
Characteristics	light and aromatic less cuppage than CTC Darjeeling tea is also an orthodox tea but is sold separately due to its unique "muscatel" flavour	strong and dark liquor appearance of dry leaf is granulated twice the cuppage as that of Orthodox (500 cups per kg)	light coloured liquor acts as a preventive against cancer, coronary heart disease, bacterial/ viral infection

Processing	In the traditional method, freshly plucked leaves are withered to induce loss of moisture. These are then rolled to rupture leaf cells and release enzymes. This is followed by fermentation and firing.	Process similar to orthodox except in the sphere of rolling to achieve accelerated and intensive fermentation. This is followed by cleaning to remove excess fibres	Leaves are pan-roasted or steam treated to kill the green cells, thereby preventing fermentation
Growing areas	Sri Lanka, Indonesia, China, India and Turkey are main growing areas.	India, Kenya, Bangladesh and Malawi are the major producers of CTC tea.	China is the largest producer of green tea. In India, it is grown in some parts of Dooars, Kangra and South India.
Grades	Whole-leaf (size 3 ¾"), brokens, fannings, dusts	Brokens, fannings, dusts	Whole-leaf, brokens, fannings, dusts

Table 6: Category-wise Production of Tea in India during 2016–17

Category	North India	South India	All India
	Production (Million kg)	**Production (Million kg)**	**Production (Million kg)**
CTC	969.71	162.09	1131.80
Orthodox (Darjeeling + Green)	73.40	45.29	118.69
Total	1043.11	207.38	1250.49

Oolong tea, which is not made in India, is an intermediate between black and green with regard to fermentation.

9.2 Organic Tea: Organic tea is grown without the use of synthetic chemicals or pesticides, using only sustainable interdependent farming methods. It commands a premium over conventionally grown tea in the quality-conscious export market. Organic tea growing is highly knowledge-intensive, labour-oriented and complex system integrating several organic recycling processes.

9.3 Popular Tea Variants: Tea variants, like tea bags, instant tea, tea mix, iced tea, frozen concentrates, flavoured tea (in strawberry, vanilla, 'masala', herbal flavours etc.) have been introduced to popularise consumption. Instant tea and soluble tea, in the form of dry solid concentrate, liquid tea concentrate and semi solid frozen products ("slushes"), canned tea or cold packed tea, are fast gaining popularity. The quality parameters are separate in the case of instant/ iced tea where caffeine-tannin precipitate has to be removed.

10. MARKET STRUCTURE

10.1 Auctions: About 45% of the total tea produced in India is sold by auction. Tea Auction is a means of disposing the teas produced to a wide range of buyers in a competitive manner for fair discovery of price. It always ensures better realization of tea prices due to competitive bidding environment. Auction is especially suited to tea owing to nature of the commodity with infinite varieties (based on flavour, age, appearance, pedigree etc.), scattered location of gardens and wide range of buyers. The auction mechanism ensures fair price to the producer, continual sale without fear of unsold stocks (as tea is perishable within 1–3 years) and automatic payment collection. This system introduces greater deal of transparency compared to private sale, which at times goes unreported and is referred to as 'laddoo' or black sale in tea trade jargon.

10.2 There are seven registered auction Centres in the country-Kolkata, Guwahati, Siliguri, Jalpaiguri in the east and Conoor, Cochin and Coimbatore in the south. Prior to 2009, tea auction was carried out manually across the tea auction centres of the country. Electronic auction for tea was introduced in 2009 (except for Darjeeling Tea). Such e-Auctions are being conducted on electronic platform provided by Tea Board of India. Pan-India e-Auction of tea was implemented from June 2016 across all the auction centres. The total volume of tea sold at major auction Centres in 2016–17 is as below:

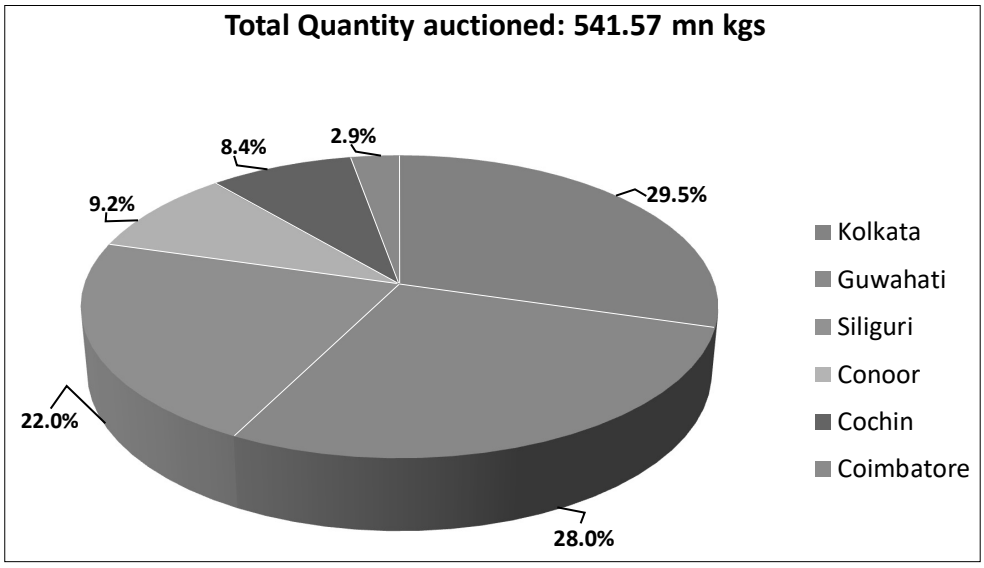


Fig. 6: Auction Quantities in Major Centres (2016–17)

10.3 Tea Futures: Tea prices show both random and cyclical variability. Theoretically, futures trading in tea would be a useful hedging instrument for producers to insure themselves against price risk. Futures trading in tea will not only curb volatility but also help in the process of price discovery, benefiting both buyers and sellers. Besides, this is expected to facilitate greater liquidity and firmer prices over time. Initial attempts to launch futures trading in tea in India have been made by the Multi Commodity Exchange (MCX) which has initiated talks with all stakeholders in the tea trade *viz.*, brokers, buyers and producers. The move comes after the Central Government which notified that futures trading could be initiated in tea.

10.4 Blending: Tea blending operation commences with the receipt of the tea chests from the auction centres. Normally, tea has seasonal variations in quality, appearance and density. Hence blending is done to obtain consistent quality. Also, it enables differently priced teas to be mixed and sold at an affordable price. Blending may be manual or mechanized and great accuracy is required to match the actual 'standard' as in miniature blends. The blended tea is then packed to retain the aroma and keep out moisture.At times it has been seen that the weight of the blended tea is slightly higher than that of the combined weight of the various qualities of the teas used for the blending. This is due to absorbtion of moisture while blending.

10.5 Loose Tea and Packet Tea Market: In the retail market, tea is sold in loose or packaged form. At the start of 2015, about 45% of overall tea consumption in India was accounted for by unpackaged tea. This share dropped well below 40% by the end of 2016. In 2017, India consumed a total retail volume of 678.20 million tonnes of packaged tea. Packet tea accounts for roughly 50 per cent of the country's total tea consumption. The segment is currently dominated by brands such as Tata Tea (a product of Tata Global

Beverages Ltd), Lipton, Brooke Bond (Hindustan Unilever Ltd) and Wagh Bakri Tea.

11. CHARACTERISTICS OF INDIAN TEA INDUSTRY

11.1 Cost of Labour: Tea is one of the most labour intensive agricultural activities. The main components of expenses in the tea garden are labour cost, fertilizers, chemicals and pesticides. Labour cost involves wages and heavily subsidized food ration to the families of plantation workers. Plucking is the most labour intensive among the operations involved in production. Nearly 70% of the labour involved in tea production is used for the plucking operation and approximately 40% of the cost of production of tea goes into payments for labour involved in plucking operation. Temporary workers are employed during the peak period of June-October. When production declines, the labour cost, being fixed, has an adverse effect-leading to higher unit cost of production.

11.2 Productivity: While the tea industry has come a long way from production of 570 million kg in 1980 to 1250 million kg in 2016, yield per hectare continues to remain low. The average yield per hectare in Assam is around 2330 kg, in Darjeeling around 2510 kg and in South India around 2050 kg. The average yield per hectare of North Indian tea gardens vis-à-vis South Indian tea gardens is represented in the figure below:

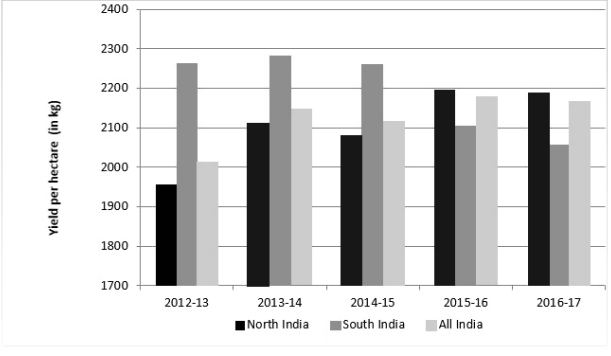


Fig. 7

11.3 Age of Bushes: The tea bush begins to give lower yield after reaching the age of 50 years. Out of the total tea acreage in the country of about 5.77 lakh hectares (in 2016–17), the bushes with over 50 years of age are about 1.48 lakh hectares (about 25%). The yield increases periodically as newer bushes come into production. Increasing replantations, infilling at the tea estates, extension planting in non-traditional areas and improved drainage and irrigation facilities are required to replenish shortages in the long run, although in the short run the industry may have to tradeoff with decreased level of production in line with a loss in crop through pruning. Apart from low yield, old bush profile also implies increased expenditure on uprooting and replantation. The annual rate of replantation has not been adequate. Against the target of 40,000 hectares for replantation of ageing bushes for the 12th Plan ending 2016–17, the actual achievement of replantation is 19,760 hectares only.

11.4 Soil Conditions and Planting Material: The yield of tea garden is dependent on the condition of the soil. For instance, Darjeeling bushes are low-yielding due to lack of sufficiently deep subsoil layer, besides unfavourable climatic conditions for a major part of the year. Another reason for the low productivity of Darjeeling tea is that large number bushes are of Chinese variety which are generally low-yielding. Constant research is being conducted in India to clone bushes. There are different types of clones available-ones which give extremely high yields, others which give excellent quality and in varying degrees a mixture of the two.

11.5 Labour Productivity: The land man ratio in the tea crop sector is about 2.5 labour units per hectare. The productivity per labour is 910 kg in Assam, 957 kg in West Bengal, 1473 kg in Kerala, 1780 kg in Karnataka and 3584 kg in Tamil Nadu. The low-yield in Assam is primarily due to factors such as long plucking rounds owing to holidays, employment of large number

of temporary workers during the plucking season, lack of workforce continuity and social factors such as chronic absenteeism, alcoholism etc. Labour productivity is low in Darjeeling primarily due to hilly terrain, fine plucking and shorter plucking season. Mechanization in tea industry is hampered by hilly terrain, unplanned plantation and unionized labour. It is catching up in South India where coarse plucking is a norm and labour is expensive. Apart from the above factors, productivity is also a function of the quality of tea produced (depending on fine or coarse plucking method) and the practices of individual estates.

12. FINANCE IN TEA INDUSTRY

12.1 The fortunes of tea industry, being an agro-based industry, are susceptible to the vagaries of nature, world crop and stock levels. Long-term finance is required for acquisitions, extension/ maintenance of planted areas, manufacturing facilities, power generation, transport fleet and housing and welfare measures for the employees. Short-term finance is required for carrying on the day-to-day operations.

12.2 Working Capital Management: A closer look at the working capital management of tea industry reveals surplus cash during the months from September to March, when the realizations from the sales (both export and domestic) start accruing. The period between April to August demands high wage outgo for seasonal labour, increased manufacturing costs etc. resulting in deficit. Typically, 6 to 8 weeks elapse between plucking to realization through auction. Payment is immediate from the export market, which is usually realized through a forward contract with the producer. Blenders and importers, being bulk buyers, have exactly opposite working capital cycles.

12.3 Borrowings: The source of financing of tea industry is made up of equity from the promoters in the form of land and cash, loans from commercial banks, assistance from Tea Board of India and National Bank for Agriculture and Rural Development (NABARD). Loans from NABARD are generally available only for projects which involve an extension of planted tea areas and carry a minimum promoter contribution of 25%. For manufacturing facilities and machinery, finance is usually arranged under the Tea Board Hire Purchase Scheme or Bill Discounting Schemes of financial institutions. Term loans from commercial banks were available mainly to large borrowers in terms of cash credit, packing credit and bills discounting facilities. After tea was placed as a priority sector lending item with reduced interest rates, public sector banks are also providing finance to small tea growers. Financing of tea industry is also being made through the Special Purpose Tea Fund (SPTF) setup by the Government in 2007.

12.4 Future Projections: The global tea market is expected to exhibit a 2.80% CAGR between 2014 and 2020. The world consumed 2.9 million tonnes of tea in 2016, up from 1.6 million tonnes in 2002. Global consumption of tea is forecast to reach 3.3 million tonnes in 2021. In 2016–2021, the global consumption of tea is expected to grow at 15%. More than half of global tea consumption comes from Asia. The share of India's exports tea has consistently declined over the years from about 20% in 1986 to only about 12% of the global trade in 2016. Hence, appropriate strategies and incentives need to be in place for encouraging the farmers for growing tea and for bringing additional land under new plantations of tea in order to catch up with the challenges of global demand for tea in the coming years.

Table 7: India: Tea Trends

Year	Area under Tea ('000 Hectares)	Yield Per Hectare (kg)	Production (Million kgs)	Exports (Million kgs)	Retention (Million kgs)	Sold in Auctions (Million kgs)
2012–13	563.98	2012.61	1135.07	216.23	918.84	512.36
2013–14	563.98	2143.30	1208.78	225.76	983.02	531.08
2014–15	566.66	2112.70	1197.18	199.08	998.10	553.02
2015–16	566.66	2176.15	1233.14	232.92	1000.22	536.08
2016–17	577.48	2165.43	1250.49	227.63	1022.86	557.03

Source: Tea Board India

Table 8: Indian Exports

Name of the Country	2016–17		2015–16	
	Qty. (M. kg.)	Value (Rs. Crs.)	Qty. (M. kg.)	Value (Rs. Crs.)
Russian Federation	45.21	683.38	48.23	670.57
United Kingdom	16.06	316.14	20.02	140.9
Germany	10.79	262.01	10.53	262.76
USA	14.61	405.63	14.03	364.61
UAE	18.84	390.61	16.15	333.65
Iran	24.24	632.82	22.13	571.81
Pakistan	11.13	113.69	19.37	192.61
Others	86.75	1828.22	82.46	1956.19
Total	227.63	4632.5	232.92	4493.1

Source: Tea Board India

13. ACCOUNT BOOKS AND REGISTERS

13.1 Important accounts books kept in a tea estate are as under:

i. **Green Leaf Account/ Register:** This shows weighment of green leaf before it is taken for manufacture.

ii. **Manufactured Tea Weighment Register:** This shows output of manufactured tea from the drier machine.

iii. **Tea Book Register:** This contains details of green leaf processed, output of made tea and tea waste.

iv. Registers as prescribed in GST Act

13.2 Registers

13.2.1 The AOs can obtain very useful information from the records maintained under CGST Act/ IGST Act.

13.2.2 Registers and Sales Account are maintained estate-wise because each estate is taken as a separate unit. Therefore, if an assessee has more than one estate, there would be separate registers for each estate. The tea can be moved from one state to another state on issue of waybills only.

13.2.3 In one case, the assessee was disclosing its affairs with regard to one estate though it had also taken on lease another estate having no factory. The green leaves of the estate taken on lease were being manufactured in the factory of the original estate and were being sold. Though some of the expenses including Central Excise Duty in respect of the estate taken on lease were passed through the disclosed accounts of the original estate, the entire production and sales for the estate taken on lease were altogether kept concealed.

14. TAX INVESTIGATIONS

14.1 Application of Rule 8

14.1.1 Tea industry has been accorded special status in the Income-tax Act, 1961; perhaps due to its importance for the Indian economy. Rule 8 of the Income-tax Rules, 1962, outlines a special method by which income from sale of tea grown and manufactured should be computed. The Rule provides that income derived from the sale of tea grown and manufactured by the seller shall be computed as if it were income derived from business but only 40% of such income shall be deemed to be the income liable to tax. The Rule also states that for computing the income due allowance shall be given to the cost incurred for planting the tea bushes, either as a replacement or for planting in areas which had become useless.

14.1.2 This Rule is for only those sellers who have grown and manufactured tea. The Rule lays down the method of computation of income by first computing the composite income from the business of tea garden by way of plantation, manufacturing and sale of tea, and then making allowances for the deductions permissible under the Act. A ratio of 40% would be applied to the net profit thus arrived, to compute the taxable income from tea business.

14.1.3 In the cases of assessees who have incomes from both Bought Leaves and Own Leaves, the assessees generally do not maintain separate P&L accounts for Own Leaves and Bought Leaves and show the total income accruing from Bought Leaves and Own Leaves. While the income from Bought Leaves is completely business income, only the income from Own Leaves is subject to Rule 8. Hence, in computing the total income of such assessees, the ratio of green leaves bought to own leaves produced should be used to find out how much income is attributable to Bought Leaves separately (which is fully taxed) and how much income is from Own Leaves separately (which is subject to Rule 8). However, the cultivations costs (plucking, labour, pesticides, weedicides etc.) also need to be disallowed in that ratio. It is observed that generally, the assessees do not disallow these costs *suo-motu* and hence, the disallowance is necessarily to be done in such cases.

14.1.4 In some cases, it is found that the assessees had let out their tea manufacturing plant & machineries to third parties in spare time in lieu of which the assessees receive rent. Such rent received on account of letting out of plant & machinery had been claimed as part of composite income by the assessees thereby claiming 60% income of the rent under Rule 8 as exempt agricultural income. In such cases, the tea grown is not on land owned by the assessee nor the tea grown belongs to the assessee and hence, there cannot be any component of agricultural income in the hands of the assessee so as to qualify the rental income on letting out plant and machinery to be eligible for treating as part of composite income. Such rental income is directly related with the use of plant and machinery and has no direct connection with agricultural activity or income of the assessee and needs to be treated separately out of the composite income under Rule 8.

14.1.5 Other Incomes: Rule 8 does not apply to an income that is not related to tea business, e.g. income by way of interest on loans advanced by tea concerns. However, if the tea business were leased out to another party for management, only 40% of the lease income would be assessable to income-tax. In *Sookerating Tea Co. (P) Ltd. vs. CIT* (1977 LTR 1255, Gauhati), the facts of the case were that, this tea company took loans from bank on hypothecation of tea crops and out of these loans the company advanced loans to sister concerns and earned interest thereon. It was held by the High Court that advancing of loans to sister concerns was not in any way related to the tea business of the assessee and, therefore, Rule 8 did not apply to the interest income received by the company. Such income was liable to be included in its total income in full and not to the extent of 40% only.

14.1.6 The words "derived from" was a subject matter of consideration by the Supreme Court in *Bombay Electric Supply Industrial Co. Ltd. vs. CIT* (1976) 113 ITR 84. In the above case, the Apex Court held that the expression "attributable to" is wider than the expression "derived from". It was held in the above case that whenever Parliament wanted to give a restricted meaning, they used the word 'derived from'. Further, the Supreme Court, in the case of *Pandian Chemicals Ltd. vs. CIT* (2003) 262 ITR 278 (SC), has also upheld the order of the Madras High Court wherein the High Court had ruled that the word "derived from" could be construed to include situations where the income arose from something having a close connection with the industrial undertaking itself. Therefore, interest incomes and other such incomes should not be considered as incomes for the application of Rule 8.

14.1.7 Attempt to 'Transfer' Expenditure: Assessees who have income from activities other than growing and manufacturing of tea attempt to inflate the income from tea business, while reducing the income from other activities by transferring part of the expenditure pertaining to the tea business to the other activities or Head Office account.

14.2 Tea Bushes: Tea bushes are generally planted:

i. To replace tea bushes that have died or become otherwise unproductive in an area which is, as a whole, under plantation. This is known as "**infilling**" or "**supplying**".

ii. To replace useless bushes, en masse, in an area which had been under plantation in the past but had been subsequently abandoned, and had stayed as such. This is referred to as "**replanting**".

iii. To bring under plantation a new area as a substitute for an old and abandoned planted area, so that there is no net increase in the total area under useful plantation. This goes by nomenclature of "**replacement planting**".

iv. To bring under plantation new virgin area so that there is attendant increase in the total area under useful plantation. This is known as "planting".

Under Rule 8(2), the cost of planting bushes falling by "infilling" or "supplying", is deductible as a revenue expenditure in computing the Income of a tea garden. Expenses on the other three activities mentioned above are capital expenditure and do not fall within the ambit of Rule 8(2). Therefore, plantation expenses shown by tea companies should be analysed critically to detect whether expenses incurred on capital items have been claimed as revenue expenditure. In *Karimtharuvi Tea Estates vs. State of Kerala* (1963), 48 ITR 83 (SC), Supreme Court held that the expenditure incurred for maintenance of immature tea plants till they become mature, even though no income was derived from them during the accounting year, is not capital expenditure and is allowable as revenue expenditure. In *MSMM Meyyappa Chettiar vs. CIT Madras* (1962) 44 ITR 775 (Mad), the Madras High Court held that once the land is acquired and made fit for plantation, plantation is actually laid, and the trees are actually planted, the state of capital expenditure ceases. Whatever is spent thereafter upon maintenance, such as weeding, superintendence etc., would be revenue expenditure, notwithstanding that trees have not started to yield.

14.3 No Depreciation on Tea Bushes: The issue whether depreciation is allowable on tea bushes has seen protracted litigation. It has been settled by an amendment to the Act in 1995 which categorically states that although tea bush is a capital asset, no depreciation is allowable on the same.

14.4 Agricultural Income: In some tea estates, part of the area is reserved for growing grass, bamboo and bushes. The income derived from the sale of such produce is fully assessable to tax. There are cases where a portion of the estate area is also utilised for growing vegetables, fruits, paddy etc. In such demarcated areas tea bushes

are grown for obtaining seeds which the estate may be selling outside. In such cases the income derived from these produce, is agricultural income not assessable to Income-tax. The expenses on raising such produce should also not be allowed as business expenditure.

14.5 Sale of Green Leaves: Income derived from sale of green tea leaves is treated as agricultural income and therefore, exempt from Income-tax. Often in arriving at the income from sale of green tea leaves, tea companies overstate the agricultural income by claiming less expenses for the cultivation of tea, particularly in those states where the Agricultural Income-tax is less than the Central Income-tax. Therefore, computation of agricultural income requires close scrutiny. The cost of green tea leaves at times is inflated by inflating the quantity purchased. To check the twin inflation of quantity and value, the AOs should call the Central Excise records. The information available in these indicate whether the so-called seller had grown tea at all and in what quantity. These may also give information about prevailing rates of green tea.

14.6 Cess on Green Leaves: The Cess on green leaf is paid for the growing and plucking of green leafs of tea plants. Growing of tea leaf is purely an agricultural activity and it is quite distinguishable from the total operation of tea growing and manufacturing. The Hon'ble Guwahati High Court in the case of *Jorehaut Group Ltd.,* has held that Cess on green leaf is to be deducted from the 60% of the income which is treated as Agricultural Income as per Rule 8 of the Income-tax Rules 1962. In view of these, cess on green leaf is not to be allowed as deduction from the composite Income.

15. MANIPULATION IN PRODUCTION

15.1 Manipulation of production starts from the garden itself. The tea manufacturing companies/ concerns very often conceal a portion of the manufactured tea from their registers with a view to avoid GST and Income-tax. Although the entire tea leaves plucked from the gardens is required to be entered in the Register but the possibility of ex-garden sale of tea leaves outside the Register cannot be ruled out. Generally a plucker's average output per day ranges between 24 to 28 kg in the gardens in Upper Assam area, and 18 to 23 kg in other places. On this basis, a general estimate of output of green tea leaves can be made by the AOs. Further, the normal net recovery of tea out of the leaves collected from a tea garden is about 22–23%. If there is a wide discrepancy between the general estimate of output of tea leaves, or tea made on these norms and the corresponding quantity shown in the Register, the matter should be examined critically.

15.2 The period of production of green leaves is from late March till middle of December, with periodic ups and downs. In the months of January and February, there is practically no production of green leaves. In many instances, it has been seen that assessees, who are mostly into production from bought green leaves, are claiming purchases in the months of January and February. Such purchases are most likely to be bogus purchases booked to inflate expenditures.

15.3 The manufactured tea is graded depending on its quality and salability, into primary tea, secondary tea and tea waste. Normally 80% of the manufactured tea comprises primary tea, 15–18% is secondary tea, and remaining 2% comprises labour tea, staff tea and sample tea etc. Companies try to understate the production of primary tea in their books as far as possible while overstating the production of secondary tea, which sells at lower prices. This practice of inflating production of secondary tea at the cost of primary tea does not affect the GST since the rate of Duty for both is same. It does, however, matter for Income-tax since this leads to understatement of sales.

15.4 Green tea leaves plucked from bushes are brought to the factory by labourers and weighed at different weighment Centres in the estate and entered in a Register. The Weighment registers

are books of primary entry. The labourers are paid wages according to the quantity of green leaf weighed for each of them. Apart from the regular wages, extra incentives are also given to the labourers if the quantity plucked is in excess of the minimum prescribed. In some estates, a deduction from weight is made towards excessive moisture content. Where such practice is followed, the output of manufactured tea should be higher.

15.5 Production of tea is greatly dependent upon the monsoon conditions. In the event of drought, the yield of tea is very low. Similarly hailstorm damages the leaves, buds and plants resulting in low production. Therefore, where lower productions are shown it would be necessary to investigate into the exact causes for the same. If the assessee claims that the lower production was due to drought or hailstorm, he should produce supporting evidence. Tea estates maintain record of fluctuations of temperature, rainfall etc. Reports regarding drought, hailstorm etc. also appear in the contemporary journals on Tea showing area wise details. Often the crops are insured against damages. In these cases the assessees receive payments from insurance companies.

15.6 Consumable: Apart from tea leaves coal, light diesel oil, high-speed diesel oil and other lubricating oils etc. are required for manufacturing tea. Their actual consumption depends on state of machinery, quality of inputs etc. In many cases AOs apply quantitative consumption ratios for verifying consumption of these items *vis-a-vis* the quantity of tea manufactured. If disproportionate consumption of these items is claimed, reason for the same should be ascertained and scrutinized. Diversion to connected concerns is another way of inflating the cost of these items.

15.7 Fuel Expenses: While examining the manufacturing expenses the AO should scrutinize fuel and power consumption claimed by the assessee. Generally, for production of one kg of tea, 0.92–1.25 kg coal, 0.25 litre high speed diesel, or 0.60 unit power is consumed.

16. SALE OF TEA

16.1 Consignment Sales: Tea is mostly sold through auctions. Auction Houses are the barometers for the actual sale price of a particular brand of tea. Auction fetches the maximum sale price for a particular brand of tea on the day. Despite this, often tea manufacturers sell their stock in open market at a lower price. Of late, ex-factory or ex-garden sales or sales on consignment basis are being increasingly made. The real intention could be to suppress turnover. Open market sales need verification. In consignment sale, tea is sent to big dealers on consignment basis to be sold by the latter at a negotiated price agreed before the dispatch. Under-invoicing in these sales cannot be ruled out. Consignment sale is also used for avoiding or saving Central sales tax, as in this there is no transfer of property from principal to agent. An obvious way to tackle such sales is to compare the prices fetched on such sales with the prices prevailing at the auction Centres. Wide variation in the prices would indicate possibility of suppression of sales.

16.2 During searches on a reputed tea group, it was found that the assessees were making huge sale of tea through consignment agents outside the auction house. Scrutiny of books revealed that in the sales registers against each consignment sale, an alphabet such as "E", "P" or "T" had been written in pencil. On an interrogation of the concerned officials, it was found that these alphabets represented their respective number in a scale of 1 to 26 i.e. "E" represented Rs. 5, "P" represented Rs. 10, and "T" represented Rs. 20 indicating the cash amount of Rs. 5 or Rs. 10 or Rs. 20 per kg. for the relevant consignment sale. Sale price quoted in the sale bills was thus on an average less by Rs. 10–20 per kg from the rates quoted at the auction houses. The group had collected the difference of Rs. 10–20 per kg from the consignment agents in cash, out of which a part was given to the agents as kickbacks.

16.3 Manipulation through Auction Houses

16.3.1 The sale by regular auction should be supported by sale notes from the brokers. These sale notes contain information as to the quality and quantity of tea sold. This should be checked with reference to the dispatch register which indicates the serial number, date, marking, weight, gate pass number, consignee, lorry number, RR or steamer or postal receipt and way bill nos. The tea in transit is normally insured. Therefore, no claim of loss in transit of tea should be accepted without considering the compensation amount received from the Insurance Company.

16.3.2 Many times tea companies sell their tea in open market outside the auction house with the help of auction houses themselves who make entries in their records as though the tea was sold through auction. The selling prices in these cases would be lower than the auction price of the day. Such transactions are more common between sister concerns of the group owning the auction house. In these trading, the buyers generally do not adhere to the payment schedule of 15 days prescribed by Tea Board. The AOs, while scrutinizing sales through auction, should therefore, verify any discrepancy between the price quoted in auction house rate on the date of sale & the actual sale price shown in the bills; and whether the duration of settlement of bills by the buyers was more than that stipulated by Tea Board. If the payment came to the assessee after 15–20 days, it could be possible that the sale was made in open market & the difference between quoted price and sale price collected out of books, after sharing a portion as commission with the buyer.

16.3.3 Almost every tea estate sells tea locally apart from selling in wholesale. There is ample scope for suppression or concealment by manipulation of invoices/ bills of local sales. Some garden owners also smuggle tea out of the gardens by duping the excise personnel and net the entire proceeds in black money. The malpractices possible in ex-garden or private sales are not possible in auction sales, since the price quoted is on record. The price of tea sold through auction is invariably higher than that on private sale. A common defense for private sales is that, in auction the proceeds are received after considerable delay and since capital invested in the business is borrowed, private sales are made to cut interest cost. The practice in auction sales is that the buyer must pay the price (less deposit if paid) of the lot purchased on or before the prompt date, i.e. Monday for leaf tea and Wednesday for dust tea in the week next but one following the sale. Thus, the payment has to be made within two weeks, which is not an inordinately long time. There is scope for manipulation in sales through private parties. Cash sales from gardens are sometimes suppressed, which is known as 'Uchanti' sales. This can only be checked with active cooperation of GST authorities as well as on the spot survey.

16.3.4 In cases where the difference in auction price and the price shown on private sale of tea of same grade and quality, is disproportionate a thorough scrutiny is called for. In one case the Company Law Board, during its inspection, noticed that for three years no tea was sold by the company in auction. Instead, during this period entire tea was sold through private sales at various places. The average sale price of Cachar tea shown by the company in its books for three years were lower than the average of Calcutta auction rates for Cachar tea during the same years. This provided ground for further inquiry by the department.

16.3.5 Sometimes in order to evade sales tax in their home state, where the rate of sales tax is higher compared to the rate in the neighbouring states, the tea companies show in their books as if the tea sales were effected outside the state, by arranging bills and cheque remittances from the outside state, whereas the tea is actually sold locally at higher prices. In such cases, the genuineness of the sources located in outside states from where the assessee received or

was receiving sale proceeds may be verified. Sometimes these sources/ bank accounts could turn out to be owned by the assessee itself. With the introduction of GST w.e.f. 01/07/2017, this malpractice should be over.

16.4 Export Sales: Under-invoicing exports, particularly when there is no export duty and so no check by the Customs is a common practice. Often dummy exporters are setup to divert profits. A usual explanation is that contract with the foreign importer was entered earlier at a time when the prevailing market rates were low. Whereas, the actual situation may be that the contract of sale was entered into a time when higher rates were prevailing. Investigation into under-invoicing of exports can be done on the following lines:

i. The contract between the foreign buyer and the Indian exporter is usually made through cables. Confirmation cables are followed up by contract memos. The AOs should verify whether.

ii. The rates are as per contract cable.

iii. the rates mentioned in the contract memo tally with those in the contract cable.

iv. the rates compare favorably with the prevalent market rate on the date of contract.

v. the rates tally with the rates in the invoice.

vi. The description and qualities of goods as per confirmation cable and contract memos tally with the description in the invoice and the GR forms sent to Reserve Bank.

vii. An examination of the "accounts sales" received from the foreign broker at times gives valuable clues to the real sale proceeds of the consigned goods.

viii. Scrutiny of 'sundry payments' made by the Indian agent of the foreign buyer in connection with export of the commodity may be useful, as sometimes the difference between the actual price of the exported commodity and the invoice price is paid to the exporter's nominees under the assumed head of "sundry expenses".

ix. It may be useful to examine the applicability of Section 92 of the Act. Normally such sales are made to a "closely connected" Nonresident company such as the holding company of the Indian exporter or a sister concern under the same holding company with a common management.

16.5 Sample Tea: Tea export houses customarily receive sample tea in large quantities from various auctioneers and tea-brokers. These samples are sometimes sold in the market. In one case, Department collected information about the receipt of such tea by referring to the auctioneers and tea-brokers. As a result it was found that large quantities of sample tea were received by the concern, but not disclosed to the Department. The AOs can call details of sample tea received by the assessee and crosscheck this with the auctioneer's brokers. In case discrepancies are detected, the assessee may be asked as to how such tea was disposed off.

16.6 Consumption of Tea Chests and Gunny Bags *vis-à-vis* Sales: Tea chest and gunny bags are used by tea companies for dispatching finished tea to the selling point. Often the tea chests and gunny bags used are not in proportion to the quantity of finished tea dispatched. Tea chests are of various sizes, ranging from 48 cm x 48 cm x 60 cm to 40 cm x 50 cm x 60 cm. The last one is the standard pallet size in the ocean going ships. The weight of a chest depends on the grade of tea packed. For example, orthodox type of tea takes more volume than the CTC type. The Orthodox type leaf tea is lighter than the broken one, whereas the dust tea is heavier than the brokens. Similar is the position with CTC, the broken are lighter than the fannings or Pekoe fannings whereas the dust is heavier than the other grades etc.

Often complete tea chests are made in the tea gardens themselves using battens, stocks and tops. In these cases a stock book of the tea chests manufactured is maintained. A thorough check of the tea chests stock register along with invoices through which packets of tea were dispatched and countercheck of these invoices with the Excise Register where the number of tea chests and gunny bags taken out of the garden is quoted, can provide clue to the modus of tax evasion adopted. In fact, in one case it was detected that the tea chests were lent by one garden to another garden, a sister concern, but the expenses on account of these tea chests were claimed in the P&L account of the receiving company. This is a common practice for gardens under the same management control. Purchase of excess consumable materials such as tea chests, coal, fertilisers etc., are debited to the accounts of the more profitable concern to reduce tax incidence. Therefore, while scrutinizing the tea-chest account or other such consumable accounts, the AO must check corresponding expenses in cases of sister concerns so as to get a feel of the expenses under these heads. In appropriate cases, cross verification can be made from suppliers of the tea chests or parts.

16.7 Waste Tea: Production and sale of waste tea is another item for investigation. Normally, the percentage of waste tea in both Orthodox and CTC manufacture is about 3%. The decision for declaration of waste generally rests with Garden management. Waste tea can be disposed off either by destruction, or for making compost, or for manufacture of caffeine, or by sale/ export. Further, the waste tea can be sold only to a licensee. In one case of an excessive claim of waste tea, the assessee was asked to produce the required certificate of the Excise, because destruction of waste tea can only be made on the permission and in presence of the Central Excise Inspector. Enquiry with Central Excise confirmed the suspicion that part of the claim for waste tea was bogus, resulting in a substantial addition to the profits.

17. STOCK VERIFICATION

17.1 Secured loans are normally obtained from banks by the tea companies by pledging or hypothecating tea stocks. These stocks are also insured. To counter suppression of stocks, the stock position as per the stock statement submitted to the department should be verified with the statement of stock submitted to banks. It would be also worthwhile to check stock statements given to the insurance companies. But before coming to conclusion on the variation in the stock, further enquiries should be made.

17.2 While examining the stock of tea in one case, the AO found that the stock of tea at the end of the accounting year shown in the stock register was much less than in the stock statement furnished to the bank. The assessee explained that the stock figures submitted to the bank were given before final adjustment of stock account was made. The explanation was found to be incorrect. Investigation showed that a substantial quantity of tea, stored in company's warehouse, was disclosed to the bank in its stock statement but not in the stock register. Consequently, the difference was considered while framing the assessment.

17.3 Undervaluation of Stock: The tea stocks are valued at cost or at market price whichever is lower. Sometimes to reduce profits of a particular accounting year, especially where advance tax paid is less, large quantity of tea lying with Agents is shown as unsold tea. It should be checked from Agents, by obtaining certificates, if such stocks were in fact lying unsold as on the stock valuation date. The AOs should closely examine the method of valuation of made tea. Normally, closing stock of made tea is valued at realized/ realizable prices. The AOs should check whether this practice is uniformly followed from year to year.

18. EXPENSES

18.1 The expenses in a tea estate can be agricultural expenses or manufacturing expenses. Following are normally agricultural expenses:

i. New clearance for planting.
ii. Upkeep of immature tea.
iii. Weeding.
iv. Terracing.
v. Pruning.
vi. Manuring.
vii. Control of pests and diseases.
viii. Supplying.
ix. Upkeep of roads and drains.
x. Wages.
xi. Upkeep of buildings.
xii. Shade of trees.
xiii. Plucking.

18.2 Before scrutinizing the expenses, the AO should seek information about total area of the garden owned and brought under tea plantation. This can be ascertained by examining Balance Sheet of the company or by calling following information under Section 142(1):

i. Tea in bearing or land under plantation and nurseries.
ii. Land under factory and other housing including hospitals, schools and clubs etc.
iii. Land under other plantations *viz.* coffee, rubber etc. if any.
iv. Land under agriculture other than tea, coffee, rubber plantation etc. showing the item of crop grown
v. Land under orchards, parks, playgrounds etc.
vi. Land under roads, drains, rocks and waste, including all other unusable land.
vii. Vacant land including uprooted areas.

A comparison of the above details with those for the previous years will reveal the changes in acreage in respect of the different heads. If any new clearing has been done for tea plantation, it will be immediately known. No tea garden can bring additional area under tea plantation without the prior approval of the Tea Board. Therefore, obtaining information from the Tea Board in suspected cases is one of the first steps of investigations. Tea Board also has particulars regarding extensions to tea areas for each estate. Information regarding new extensions facilitates verification as to whether certain expenses claimed to have been incurred for in-filling were really incurred for such purpose or for plantations in new areas. It is also necessary to examine the break-up of the acreage as planted areas, planted areas abandoned, and newly extended area under plantation so as to have an idea whether some capital expenses have been incurred. These details are available in the Annual Returns submitted by tea estates to Tea Board.

18.3 Capital Expenditure *vs.* Revenue Expenditure*:* Tea companies often claim various capital expenses incurred towards new cultivation/ extension as revenue expenditure in their accounts. The Tea Board gives loans as well as subsides for new cultivation under different heads of extension. It gives loan for extension of cultivation and subsidy for operating and repair of rejuvenating the plants. Wherever the companies avails subsidies or loan from Tea Board they show the expenditure as capital in their Balance Sheet. Some tea companies, instead of availing the loan/ subsidy write-off the entire expenditure in their books by debiting their Profit & loss account. The AOs should be vigilant while scrutinizing the expenditure in the cases of extension plantation shown as nursery expenses, land development expenses or repair expenses. Some tea companies manipulate their accounts in such a way as to show capital expenses on preparation of virgin soil, clearing of jungle by uprooting standing trees, spading, furrowing, watering of virgin soil, plantation of new tea bushes, and cost of young plants etc. as if they were expenses on hoeing, weeding, pruning etc., which are revenue expenses.

Similarly, under the head 'estate expenditure' items like upkeep of buildings, roads and drains are included. Any disproportionate increase in expenditure as compared to the preceding year can be indicative of capital expenditure being camouflaged as revenue expenditure. This may require detailed scrutiny of accounts. A visit to a tea estate would show that there are several coolie lines consisting of both temporary huts and permanent constructions. Replacement of temporary huts is allowed as revenue expenditure but if the replacement is by permanent construction, the expenditure is capital. Expenses on construction of roads, permanent fencing etc. has to be treated as capital. The AO can refer to the Monthly reports of Estates, furnished to the Head Offices, where details of such expenses are recorded.

18.4 Direct and Indirect Expenses: In South India many concerns own tea, coffee and rubber estates. Consequently, there are several items of common expenses e.g. Head Office and management expenses, interest payments and depreciation pertaining to the concern as a whole. These are indirect expenses as against the direct expenses, which are incurred on tea, rubber or coffee cultivation and manufacture separately. Each estate follows its own method for the allocation of indirect expenses when computing the income under each crop. CBDT vide Circular No. 26-D of 10/10/1966 had clarified that in cases of estates having mixed plantations indirect expenses i.e. expenses like depreciation, repairs, etc., that cannot be directly related to a particular business (e.g. tea), the apportionment should be made on "labour day" basis, i.e. on the ratio between the number of labour days spent on different kinds of crop (e.g. tea, coffee, rubber).

18.5 Pruning Expenses: Two major expenses incurred by a tea garden before the bushes are ready for plucking, are on pruning and manuring. Pruning is of two types *viz. deep pruning* and *light pruning*. Deep pruning is generally necessary once in every five year. In cases where expenses on deep pruning are claimed, the records of the plants subject to pruning should be examined. The dictum, that bushes need deep pruning once in five years should be applied to ensure that expenses on this have actually been incurred. The total area subjected to deep pruning should be compared year to year to ensure that the expenses claimed under this head are reasonable.

18.6 Manuring Expenses: Tea estates usually maintain charts showing areas subject to manure in a particular year. The same area is usually not manured every year. The only way to check that inflated expenses have not been shown is to compare the manuring charts. It is not unusual to find that manure is shown as purchased towards the end of the accounting year and could not have been utilised during the year. The AO should keep in mind the period of tea season in the area in which the garden is situated.

18.7 Labour Expenses: Two types of labourers are employed in Tea estates *viz.* Permanent labour and Temporary labour. The temporary labour or 'contract' or 'theka' labour are employed only in plucking season. About 60% of the labour force is employed in plucking operations. There is often large inflation in Wages account of temporary labour. The AOs should critically scrutinize the Wages register to determine any sham wages shown as paid to these labour. Temporary labourers are also entitled to subsidized rationing in the garden. Therefore, in doubtful cases Register for distribution of ration to labourers can also be examined. A through check may reveal names of labourers not figuring in the register for ration distribution. Another useful method of detecting inflated wages on temporary labour is to check up monthly plucking yield from the Weighment register (Green leaf account), and compare the plucking yield during off-season months when the labour employed is less, with the figures of plucking yield in a seasonal month, where labour employed is more. If the ratio of yield to

number of labour employed in plucking season month is not very much higher than the yield in the less active month, there may be reason to doubt the payment of wages shown. It will also be worthwhile to obtain the number of workers employed at each stage of cultivation and manufacture of tea.

18.8 Bogus Job Work: The tea companies give large contracts for weeding, manuring, neem oil spraying etc. on the tea gardens. In a search at Kolkata in 1999 an Income-tax practitioner was found to have floated numerous paper companies engaged in giving 'job work entries' to established tea companies. These job works/ contracts were in reality never performed, and merely the bills were issued. The tea companies approach these entry operators through a middleman/ broker. The entry operators issue invoices of the paper companies to the tea companies. The paper work relating to the contract is supplied by the beneficiary tea company. The beneficiary tea companies make the payment through account payee cheques. These cheques are deposited in the account of the paper companies, and once the proceeds are credited, the amount is routed through the bank accounts of these dummy concerns and cash is withdrawn and handed over to the middlemen/ beneficiary tea company. The beneficiary company even deducts TDS on the job work contract and deposits the same in government account. The amount so deducted is also shown in the annual TDS Return of the beneficiary tea company (Form 26C). The tax deduction is resorted to not merely as a legal requirement but to give a colour of genuineness to the entire transaction, the entry operator receives commission in cash for the services performed. A part of the commission is also paid in the form of the TDS certificates to the paper company. The paper company fabricates its *P&L* A/c and brings down its profit to insignificant levels and claims refund of the TDS amount. The job work amount is debited in the account of the tea companies as genuine business expenditure and cash is siphoned out by directors/ promoters of the company. Therefore, the AOs should examine the details of contracts given by the tea companies. In case of doubt a physical verification of the office of the company/ firm performing the contract may be made. Generally these paper companies have no offices and Directors are mere name lenders. If necessary Directors of these companies can be examined under Section 131 of the Act as regards their technical expertise in performing the contract. Their Balance Sheet and Bank Statements would also provide telltale evidence distinguishing a genuine contract from a bogus one.

18.9 General Expenses: Personal expenses of management are often debited under General expenses or welfare expenses. The AOs may examine some items of expenditures under these heads which are disproportionately high and make appropriate disallowance of items having no nexus with the business activities.

18.10 Expenses not Accrued During Accounting Period: Often expenses in the nature of Excise duty in respect of tea not cleared from factory during the accounting year are charged as revenue expenditure. Similarly, freight, transportation, selling expenses etc. on such tea lying in the factory are also debited to the Profit and Loss account and is shown the same as a liability in Balance Sheet. Such expenses are not allowable.

18.11 Complimentary Tea: Generally, tea companies distribute complimentary tea packets amongst shareholders at the time of the Annual General Meeting. But it should be noted that any expenses on the shareholders, being the owners of the company, either in kind or in cash are not allowable as revenue expenditure. Further, complimentary tea packets given to visitors are exempt from excise duty. The companies should be asked to furnish list of persons to whom complimentary tea was given. Investigation in one case revealed that the complimentary tea, exempt from excise duty and expenses incurred

on which were allowed as revenue expense, was sold in the market but the sale proceeds were not disclosed in books.

18.12 Depreciation: While claiming expenses against agricultural income, tea companies do not take into account depreciation on common assets, such as administrative buildings, hospitals, labour lines etc. Used for both agricultural and manufacturing operations. Proportionate depreciation on such assets should be disallowed.

18.13 Tea Development Account: Deduction under Section 33AB is allowable on Fulfilment of following conditions:

i. The assessee must be engaged in the business of growing & manufacturing tea in India.

ii. It must deposit an amount in an account maintained with NABARD as specified under the scheme in the Tea Deposit Account (TDA).

iii. The amount should be deposited within six months from the end of the previous year or before furnishing the return of income, whichever is earlier.

iv. The accounts of the taxpayer are audited by a Chartered Accountant and an audit report in Form 3 AC duly signed and verified is filed along with the return of the relevant year.

18.14 While examining claims under Section 33 AB, the AO is advised to keep the following in mind:

i. Where any deduction is claimed under this Section, no deduction should have been allowed in respect of such amount in any other previous year.

ii. Where a deduction is claimed and allowed under this Section to AOP or BOI, no deduction should be allowed to any member in respect of the same deposit.

iii. Any excess deposit made in the previous year is not treated as deposit made in the next year or any other year.

iv. The amount standing to the credit of such special account can be withdrawn and utilised only for specific purposes i.e. for the growth & expansion of the tea industry. Deduction under this provision cannot be claimed for amounts utilised for any machinery or plant to be installed in any office premises or residential accommodation including guest house; any office appliance (other than computers) or an item of plant or machinery eligible for depreciation @100% in any year.

19. CAPITAL GAINS ON TRANSFER OF TEA GARDEN

19.1 Tea estates are classified as 'agricultural land' and therefore do not constitute 'capital asset' within the meaning of Section 2 (14) of the Act. Calcutta High court in *CIT, W.B.-II vs. Chota Nagpur General Trading Co. Ltd.,* (1969) 79 ITR 161 held that sale of tea garden is transfer of land from which income derived is agricultural income and so, there is no transfer of any capital asset as defined in Section 2(4A) of the I.T. Act, 1922. This view has been accepted by CBDT in F.No. 75/128/69-ITJ dated 01/09/1969. But, this decision is applicable only to agricultural land and not to building and machinery.

19.2 When an estate, comprising gardens, factory and other assets, is sold as a going concern, the agreement for sale does not show the breakup of the total consideration between various assets. The AO should, therefore, call for the breakup and the basis for the apportionment. Opinion of Tea Board can be taken before accepting the allocation of sale consideration between various assets.

19.3 The trees standing on agricultural land would not constitute to be part of the land. Kerala High Court in *Travancore Tea Estates Co. Ltd.* (1974) 93 ITR 314 held that trees standing on agricultural land do not form part of the "agricultural land" within the meaning of Section 2(14) (iii) of the Act, on the principle of

it being attached to or situated on such land. The Court held that the same principle would apply to houses for agricultural workers. The CBDT has accepted this vide Instruction No. 1014, F.No. 207/11/76-ITA-(II) dated 30.9.76. Therefore, sale proceeds of trees, as distinct from the agricultural land, would be chargeable to tax as capital gains.

19.4 Though the land under tea plantation may be agricultural land, but the entire land of a tea estate is not agricultural land. Cultivable land is only a part of the total area of tea estate. Most tea estates have considerable fallow land and other nonagricultural land. Such land is generally known as tilla land and jungle land, which would generally have spontaneous growth of forest and bushes, sungrasss and bamboo etc. A part of the land would be used for factory premises, godowns, offices, and labour quarters. There may also be marshy land or fishery lands. Such land cannot be treated as agricultural land either because it was never put to or intended for cultivation or because of its very nature. Sale proceeds relatable to such lands will be liable to be tax as capital gains.

20. CONCLUSION

On the basis of the above discussions, a draft checklist/ questionnaire is given in the Annexure below which the AOs may find useful for calling information in cases of tea manufacturing companies.

ANNEXURE

Checklist/ Questionnaire

(A) Balance Sheet

1. Details of **Secured Loans** duly certified by the bank or the financial institution giving full particulars of the securities offered particularly as on the opening and closing dates.
2. Details of **Unsecured Loans** giving the names and addresses and also the Permanent Account Numbers of the loan creditors together with confirmation letters.
3. Complete details of **Current Liabilities** *for expenses* giving full particulars of names and address of the creditors, and the nature of the expenditure.
4. Complete details of **Current Liabilities for supplies** (Capital assets, raw materials, stores, manure etc.,) giving names and addresses of the creditors and nature of the expenditure.
5. Complete details and nature of **Remaining Liabilities** other than those above, giving names and addresses of the persons and/ or authorities to whom such liabilities are payable.
6. Complete details and nature of each item of **Provision**. The written off amount of provision during the year may also be shown.
7. **Fixed Assets**

   a. **Buildings:** To furnish details of addition during the year if any, giving type of construction, purpose for which used, total built-up area, cost of construction etc., together with details of Loans or subsidies received, if any.

   b. **Plant and Machinery:** To furnish details of addition during the year if any, the names and address of the suppliers, description of machinery, dates of purchase, installation and date on which each item of machinery was first put to use, stating whether the machinery was new or second hand.

   c. **Electric Installation:** In respect of electric installation added during the year, to furnish description of electric installation-whether fittings, meters, generators, conditioners, compressors or other appliances etc., and names/ addresses of suppliers, contractors, dates of purchase and installation.

   d. **Furniture and Fixtures:** In respect of additions during the year, to furnish names and addresses of suppliers, description of furniture and fixture, dates of purchase etc.

   e. **Vehicles:** In respect of additions during the year, to furnish the description of vehicles i.e. whether car, truck, tractor, etc. and also furnish the names and addresses of suppliers, date of purchase and cost paid for each vehicle, separately.

   f. **Fixed Assets Sold, Demolished or Discarded:** If any item of the fixed assets was sold, demolished or discarded during the accounting year, to furnish details of such item showing the cost, the depreciation actually allowed and the value realized on such item by way of sale or otherwise.

   g. **Land and Plantation**—To furnish:

      i. Total land area of the tea estate on the beginning of accounting year.

      ii. Total land area of the tea estate on the last day of accounting year.

      iii. Breakup of area of land, on last day of accounting year under following heads-under plantation and nurseries.

iv. Land under factory and other housing areas.

v. Land under agriculture other than tea plantation.

vi. Land under forest or natural vegetation

vii. Land under drains, roads or other unusable lands

viii. Vacant land, including uprooted areas (fallow land)

ix. Mode and the year of acquisition of land

x. The annual land revenue payable

xi. Area under tea plantation at the beginning of year, new plantation made and uprooting done during the year.

xii. Certificate from Tea Board showing the area under the tea plantation at the end of accounting year.

8. Investments: To state whether the investments are held as trading or capital assets. In respect of fresh investment and sales during the year furnish names and addresses of sellers and purchasers as the case may be.

9. Closing Stock: In respect of raw materials, finished products, stores, chemical and manure to furnish the quantitative details of opening stock, production and/ or purchases, sales, consumption and closing stock. The basis of valuation of the closing stock, in respect of each item should also be furnished.

10. Sundry Debtors: To furnish names and addresses of sundry debtors and amount due from each of them.

11. Loans Advanced: To furnish names and addresses of persons to whom loans have been advanced during the accounting year, including squared-up accounts. The loans advanced to shareholders, directors, and other concerns in which a directors or shareholders are interested as a proprietor, partner, director etc., are to be furnished separately. The particulars of interest charged on loans also to be supplied. To furnish name, designation, address of the concern/ person/ authorities with whom deposits are lying as at the close of accounting year, giving the purpose for which such deposits have been made. To state whether the deposits are bearing interest or not.

(B) Profit and Loss Account

a. Analysis of salary, wages, bonus and gratuity to be furnished.

b. With regard to gratuity, to inform whether the concern maintains a gratuity fund which has been approved by the Commissioner of Income-tax. If so, to furnish a copy of the approval granted by him.

c. In case the concern does not maintain a gratuity fund, then to submit in writing the precise basis on which the debit for gratuity has been made in the concern's accounts explaining in particular whether the debit made is an actuarial liability or a mere provision.

d. Details of remuneration paid to the Directors including perquisites paid or allowed and benefits/ amenities enjoyed. To also state the functions and responsibilities of each of the Directors.

e. Full analysis of the perquisites paid or allowed to, and benefits/ amenities enjoyed by the employees drawing salary exceeding Rs. 7,500/- per annum.

f. Details of donation and subscriptions.

g. Breakup of expenditure and repairs. Details of any expenditure under the head" Repair" which is of capital nature.

h. Details of miscellaneous expenses

i. Details of legal charges, indicating the purpose for which each one of the items under this head was included.

j. With regard to traveling expenses, to furnish the necessary details as required under Rule 6D of Income-tax Rules, 1962.

k. Details of entertainment expenses within the meaning of Section 37(2) of the Act.

l. Details of commission and brokerage paid during the year of account, giving the names and addresses of the parties concerned.

m. Details of interest payment with the names and addresses of the payees and the dates of payments.

n. Details of bad debts, if any, explaining clearly the circumstances under which the debts arose, the steps for their realization and the reasons why they were written off during the year of account.

o. If loss, of assets used in business, has been claimed then to furnish the necessary details in terms of Section 32 (i) (iii), after taking into account the initial depreciation, if any. Whether development rebate/ Investment allowance had been allowed on the assets sold and if so, in which assessment year and to what extent.

p. Analysis of the profit on assets sold for purposes of Section 41(2), after taking into account initial depreciation if any, allowed on the assets in question. To state whether any Development rebate/ Investment allowance had been allowed on the assets sold and if so, in which assessment year and to what extent.

q. To give a detailed computation for the development rebate/ investment allowance claimed stating categorically whether the appropriate reserve has been created or not. In the computation of Development rebate/ Investment allowance, dates when the assets are put to use should be mentioned.

r. To furnish the analysis of total quantity of green leaf plucked from own plantations, green leaf sold or purchased, total tea manufacture giving grade wise breakup, and disposal of tea. The gross sale prices giving quantity and value, in respect of sales through auction markets or through other modes of sales to be shown separately. In regard to the sales through agents, the names and addresses of such agent also be furnished.

s. To produce the following documents:

   i. Monthly statements of garden produce.

   ii. Latest blue print showing the tea garden lands.

   iii. Copy of the annual return as filed before the Tea Board.

   iv. Registers of green leaf.

   v. All registers accounting for waste and distribution/ consumption of tea otherwise than by sales.

   vi. Annual stock registers.

21. One typical computation of tea industry: **Computation of Total Income**

Net Loss as per Profit & Loss A/c			18250238
Add: For Separate Consideration			
Depreciation		3787042	
Cess on Green Leaves		988042	
Infilling and replanting expenditure		1662176	
Subscription to TRA		76248	6513508
			24763745
Less: For Separate Consideration 100% Central Income			
Profit on sale of Fixed Assets		10842	
Interest		185625	
Miscellaneous Receipts		26723	
Subsidy From Tea Board		1138629	1361819
			23401926
Less: Depreciation as per I.T.Act			4814402
			18587523
Less: Deduction under Section 35(2AA) for contribution to TRA @125% of Pro rata gain on green leaf purchased & consumed in Mfg of Tea			95310
Total Green leaves consumed	3710049		
Purchased Leaf Consumed	622418		
Percentage thereof	16.78%		
Total Central Income @16.78% on above			3102354
			15389859
Less: Deduction under Section 33AB			2500000
Mixed Income			12889859
Central Income			
Profit from Business & Profession			
Under Rule 8 40% of Mixed Loss			5155944
Add: Pro rata Loss as determined above		3102354	
Interest		185625	
Miscellaneous Receipts		26723	
			3314703
Business Profit			8470646
Brought Forward Business Loss SRT OFF			398113
Taxable Income			8072533
Less: Deduction under Section 80IE			8072533
Total Income			Nil

Computation of Book Profit under Section 115JB:

Net Profit as Profit & Loss Account			18250238
Less: Income Exempt under Section 10			
Subsidy from Tea Board		1138629	
Agricultural Profit		7733915	8872544
Net Book Profit			9377693

CHAPTER

18

Tobacco Industry

1. INTRODUCTION

1.1 Tobacco is related to garden vegetables, flowers, weeds and poisonous herbs such as potatoes, tomatoes, eggplant, petunias, Jimson wood, ground cherries and nightshades. The family or plants is Solanaceae; the genus Nicotiana contains about 100 species, only two of which have been extensively cultivated. Nicotiana tabacam is used in cigarettes and tobacco and is the predominant type of crop tobacco.

1.2 Originally, native Americans in the Eastern United States grew Nicotiana rustica, which was the first form of tobacco introduced in England and Portugal. N. Tabacam, first introduced to the Spanish, was obtained from Mexico and South America. It has been the preferred tobacco since settlers in Jamestown, Virginia, began growing it.

1.3 Because planters believed that tobacco had to be grown on virgin soil, tobacco gradually made its way to the eastern part of what is now North Carolina. Consumer preferences for tobacco products changed decidedly from the early 1700's. No other product in the world has ever succeeded in catching the fancy of the people and in remaining entrenched as their hot favourite. Nor has any other product evoked so much controversy.

2. TOBACCO—ITS BOTANY AND VARIETIES

2.1 Tobacco is a member of Solanaceae family. Solanaceae is a large family, encompassing a wide variety of herbs, shrubs and trees. About 1800 species grouped under about 85 genera belong to this family. The family is so large that, interestingly, potato and petunias are the relatives of tobacco.

2.2 Tobacco is a leaf crop. It produces enormous leaf area. Under favourable conditions, the fully nature leaf measures, on an average 1.0-1.5 sq. ft. in area. Certain varieties of cigar tobacco produce more than 25 sq. ft. leaf area per plant with 18 leaves. The commercially grown varieties of tobacco are annuals, though some species are potentially perennial. The specie N. tabacum is rarely seen growing in wild state. It requires careful and skillful nurturing.

2.3 The total number of varieties of tobacco now in use is quite large. However, these can be classified under broad group having commercial significance. These groups are-Virginia; White Burley; Maryland Broadleaf; Cigar-tobacco varieties comprising the wrapper, the binder and the filler classes; Turkish tobacco etc. There exist besides a large number of non-descript local varieties grown in different parts of the world. The natu, desi and lanka tobsaccos are Indian examples of such varieties. They are consumed locally.

2.4 The aforesaid classification should not lead one to believe that a particular variety of tobacco is exclusively or almost invariably used for a particular purpose. True, the nondescript local varieties are used to make bidis, snuff, chewing tobacco and even low class cigarettes. But in the world of international brands of cigarettes and cigars, blending has come to stay. For a fact, if an (American) Indian, the original consumer of tobacco offered you a smoke, it would be hard to take. Back then, the taste was bitter; and so hot, it was said to burn the mouth like pepper. Before tobacco became the rage of the world, it had to become milder and sweeter, through blending. Blending improves the aroma, the flavour and the smoking quality of tobacco. Superior varieties of tobacco like Virginia command higher price, because of qualities which manufacturers of tobacco products value most.

3. CULTIVATION OF TOBACCO

3.1 The cultivation of tobacco is a highly specialized task, requiring much care and skill. Different varieties of tobacco requires different environmental conditions. The methods of cultivating tobacco also vary from country to country. These differences in methods and conditions have a direct impact on the type and quality of the leaf produced. There are, however, certain broader aspects of tobacco culture that have general application.

3.2 Ordinary tobacco does not grow in wild state as the seeds are very small and the young seedlings are too delicate to survive without manual help. Consequently, direct planting in the field is not practicable and seedlings must first be reared in seedbeds and transplanted only after they have grown to proper size. Successful production of healthy seedlings is one of the most vital tasks in commercial cultivation of tobacco. Often, it is also one of the most difficult. Therefore, much care and attention is bestowed on the preparation of seedbeds.

3.3 First, the site of seedbeds is carefully selected having regard to several factors. The location must ensure ample seedbed area, and free exposure to sunlight, avoiding shading from any source. It must provide sufficient surface drainage and under-drainage to prevent flooding or water logging of the soil. At the same time, the location should not be high or excessively dry. It should facilitate day to day observation and care which the delicate seedlings cannot do without.

3.4 Next the seedbeds are prepared. The soil is thoroughly loosened, fertilizer and manure worked in, and the soil raked till the surface is smooth. The seeds are then sown. Since the seeds are tiny and the seedbed are relatively large, it is the usual practice to mix the seeds with fertilizer, cotton seed meal or other inert material to obtain a larger volume so that sowing is rendered easy. The soil is then tamped or compacted. Tobacco is grown the world over, under a variety of climatic conditions. Seeding time, therefore, varies from country to country and, in a country, from place to place. In India, for example, the export varieties are sown late July/ early August. In USA the normal seeding time ranges from late December/ early January in Florida & Southern Georgia to late April/ early May in Wisconsin. The transplanting and harvesting seasons too vary accordingly.

3.5 Six to ten weeks after seeding, the seedlings are ready for transplantation. If they had been tended with care and skill, the healthy seedlings

would be 5 or 6 inches in height, with four to six leaves each. Meanwhile, the land is prepared carefully. Pre-transplantation preparation of the land is of utmost importance. Deep ploughing, broadcasting of fertilizer, and smoothening the surface soil are the chief features of the operation. Depending on the variety of tobacco grown, the nature of the soil, and such factors, the land may be ridged or left level. In the case of ridge culture, again, the variety of the crop determines whether the ridges are to be moderate or high. Varieties yielding large, drooping leaves are grown on high ridges.

3.6 After the land is thus prepared, the seedlings are transplanted. In India, they are set by hand. In the USA, transplanting is done also with the help of a device called hand transplanter, or by use of horse-drawn/ tractor drawn machine. While transplanting the seedlings, care is taken to ensure that there is adequate distance or gap not only between two rows but also between two plants. Normally, a week or 10 days after they are transplanted, the young plants become established. Thereafter, the soil between the rows is plowed out, and the soil between the plants broken with a hard hoe. These operations are repeated 3 or 4 times, at weekly intervals-the last operation ceasing about 10 days before the normal topping time.

3.7 Tobacco is a leaf crop and the aim is to obtain the maximum possible yield of the desired grades of leaves per acre of planted area. In marked contrast to the cultivation of fruits and vegetables where the aim is to obtain vigorous plant growth leading to a profusion of buds, the main focus of tobacco culture is to develop high grade, healthy leaves. This is achieved by an operation called 'topping'. Topping consists in the pinching or lopping off of the terminal bud. The purpose is to direct, or redirect if you like, energies of the plant towards increased and better leaf development-energies which would have otherwise gone to formation of seed heads. By preventing development of seed heads, and reducing the number of leaves on the plant, topping facilitates better leaf development, and gives body to the leaves. In superior varieties of tobacco, the number of leaves left on the plant ranges between 14 and 20. As for the timing of topping, the practice varies. Generally, early and low topping produces maximum results, though later and high topping, supplemented by heavy use of fertilisers, produces excellent results in certain varieties of plants.

3.8 'Suckering' is the operation that is carried out next. It is common experience that, when the top portion of a growing plant is lopped off, the plant fights back, as it were, by sprouting fresh shoots on the stem and the leaf axils. Such fresh shoots are called suckers. Suckers are the outward manifestation of the plant's struggle for survival. In the case of tobacco, however, the development of suckers affects the growth of the leaves already existing on the plant. In order that the leaves may develop fully, it is essential to remove the suckers i.e. pluck them off regularly. Otherwise, the advantages of topping will be lost. Normally tobacco plants are suckered in weekly intervals. As in the case of topping, so in the case of suckering, the aim is to channelise energies of the plant towards the full-bodied growth and development of a limited number of leaves.

3.9 When the leaves are ripe and mature, they are ready for harvesting. If this sounds as a truism, it is because there are no hard and fast rules for determining the right time for harvesting. Intuitive perception of the right harvesting time, acquired after long experience, comes into play. No wonder, because the right time of harvesting is a function of various factors such as the variety of tobacco grown, its end-use, the texture, colour, graininess and the degree of thickness desired in the leaf and so on. Harvesting is done either by cutting the stalk (the stalk-cutting method) or by priming or plucking the leaves from the stalk (the priming method). In the former method, the stalks are cut only when all the leaves are mature, and generally, all the plants in the field are cut at the same time, except, of course, when it is necessary to pass over small patches where the

plants are not fully mature. The priming method is a rather drawn out process. Priming starts with the bottom leaves of the plant which naturally are the first to mature. Thereafter, the middle and top leaves are primed as they mature, priming being done usually in weekly intervals. After the crop is harvested the stalks/ leaves are strung on sticks/ strings, and removed to barns for curing.

4. CURING OF TOBACCO

4.1 Curing is central to the manufacture of tobacco and its products. It holds the key to the quality of manufactured tobacco. The time, energy, and money spent on cultivating high grade leaves will be lost irretrievably, if curing is done indifferently. The process has a twofold purpose, namely, to dry the fresh leaf (so as to reduce its water content from 88 to 20%), and to aid those chemical transformations in the leaf that are needed for development of the desired qualities in the leaf. The chemical composition of the cured leaf depends on its variety, the soil, and the environmental conditions in which it has been grown. But curing under controlled conditions helps to fix in the cured leaf the chemical properties which the tobacco manufacturers value most. The significance of the simultaneous achievement of the twin objectives will be clear from the fact that well dried but uncured tobacco is as worthless as ill dried but well cured tobacco.

4.2 Temperature and relative humidity are the two factors that aid and assist proper curing. These two factors are interrelated. The moisture content of a given space at the saturation point increases with an increase in temperature. Nevertheless, their effect on the rate of curing. In other words, the rate of drying and the rate of curing do not progress pari passu. Experiments have shown that tobacco can be cured satisfactorily at any temperature in the rage of 60–95 degrees F, provided the relative humidity is favourable; that the rate of curing increases with the increase of temperature; that warm temperatures in the range of 90–95 degrees F are preferable; and that different varieties of tobacco demand different amounts of relative humidity. Low temperatures (below 60–65 degrees F) slow down the rate of curing without necessarily slowing down the rate of drying. Similarly, a very low relative humidity, while hastening the drying process, may hinder or even halt the desired chemical changes and colour development. The optimum situation is, therefore, one where the temperature lies in the range 90–95 degrees F, and the relative humidity in the range 65–80%, depending on the variety of the leaf.

4.3 There are four different ways of curing the leaf *viz.* air-curing, fire-curing, flue-curing, and sun-curing. The aforesaid names are derived from the principal means by which the leaf is cured. In all the methods, hot air is the drying agent used, and the methods differ only in the manner in which hot air is obtained.

4.3.1 Air-curing is the natural way of curing tobacco. Here the leaf is dried under natural weather conditions, and no artificial heating arrangement is made. Initially, this method was used to cure all types of tobaccos. But with the advent of flue and fire-curing techniques, the application of air-curing is limited to certain varieties of tobacco. Cigar binder and filler tobaccos are air-cured generally. In its simplest version, the barn for air-curing is nothing but an open structure (a shed) with only a roof to protect the leaf from rain. Such structures are quite effective in areas where the temperature and relative humidity are adequate for curing. Generally, however, the barns for air-curing are reasonably tight structures with adequate provision for ventilation on all their sides. Normally, the temperature and relative humidity inside the barn is regulated by opening and closing the ventilators. At times, when the weather becomes unfavourable, it may become necessary to use small open fires or stoves inside the barn. On such occasions, smokeless fuel such as coke or powdered charcoal is used. Air-curing barns vary in size and interior details. The interior, however, consists essentially of a

series of horizontal poles tier poles, each usually about 16 ft. long. The sticks/ strings bearing the leaves are hung on the poles. Bigger barns contain arrangements for supporting tier poles. The tier poles are placed about 4 feet apart horizontally. Vertically the gap or space between the poles ranges from 20" to 5 feet. The bottom most row of tier poles, however, is fixed at a height of 6' to 9' above the floor of the barn. The entire arrangement is designed to facilitate free circulation of air between the lines of leaves hung for curing. By the same token, the volume of a barn determines the optimum amount of leaves that can be cured at a time.

4.3.2 Sun-curing is one of the oldest methods of curing tobacco. It differs from air-curing in that the leaves are cured in direct sunlight. Even here, as the leaves are hung vertically to dry, they are not for the most part exposed to sunlight. In this method, the leaf dries fast but, in the process gets bleached. Temperature and humidity control is difficult to achieve. Consequently, this method is not applied to Virginia, White Burley and the like which are generally flue-cured. Turkish and other Oriental tobaccos are still cured this way.

4.3.3 Fire-curing process employs artificial heat to cure tobacco. A fire curing barn is comparatively tighter in construction than an air-curing barn. After being loaded into the barn, the leaf is first allowed to yellow under natural conditions. Thereafter, depending on the barn construction, moderate or heavy firing is employed. At times, slow firing is employed to start with and, as curing advances, stronger, heat is applied. There may also be firing and no firing intervals. Fires are started on the floor of the barn. Temperature and humidity is controlled by controlling firing and/ or by opening and closing the ventilators. With a view to imparting to the fire-cured leaf a distinctive odour, hardwood is used as fuel. In recent times, more attention is being paid to smoking the leaf rather than heating it and consequently, smaller timbers supplemented by hardwood saw dust are used.

4.3.4 Flue-curing is an improved or sophisticated version of fire-curing. In this process, heat is distributed inside the barn with the help of flues or pipes and hence the names. The typical flue-curing barn is a smaller structure than a fire-curing barn for two reasons. Firstly, flues are used to distribute heat inside the barn, and hence it is easier to secure a more uniform curing if the barn is small. Secondly, small structure facilitates easier manipulation of temperature and humidity. The furnace is the distinctive adjunct to a flue-curing barn. It is placed at one end of the barn, at the ground level. It has an arched opening through which fuel is fed into it from outside the barn. The metal flues and fluepipes are attached to the inner end of the furnace (the end opening in the barn). The fluepipes are so fitted that they run a few inches above the barn floor, and a feet or two away from the walls. The flue pipes can be arranged in more ways than one. Two types of arrangements usually adopted may however he indicated. In cases where the furnace is placed not at the centre but at the extremity of one of the walls of the barn, the fluepipes, on leaving the inner side of the furnace, run across the barn to the opposite side, take a right angled turn and run parallel to the opposite wall, take another right angled turn and run parallel this time to the side wall, return to the furnace side of the barn, and exit through the wall, and discharge the smoke and fuel gases into the chimney attached. The chimney also provides adequate draught of air. If the furnace is placed at the centre of a wall, the fluepipes leaving the furnace run across the barn to the opposite side, branch off at right angles near the opposite wall, one branch turning toward the side wall to the right and the other toward the one to the left. Both the branches then take a right-angled turn, run parallel to the side walls and return to the wall at which the furnace is located, exit through the wall, and discharge smoke and fuel gases into the chimney. The objective in all cases is to achieve optimum possible distribution of heat inside the barn. The barn is heated up gradually,

by starting, in the first instance, small fires in the furnace. As curing progresses, more fuel is fed into the furnace, and the temperature stepped up. The relative humidity inside the barn is regulated by partially opening and closing the ventilators. Under favourable conditions, the entire process takes 4 days. When curing is complete, the barn is allowed to cool. Thereafter the doors and ventilators are opened, and the leaf is allowed 'to come to order', that is to say, to absorb some moisture, so that is not too brittle to handle. Tobacco is hygroscopic and absorbs moisture and becomes supple. The curved leaves are then taken down from the tier poles in convenient lots for grading.

5. FARM GRADING OF TOBACCO

5.1 After curing, the leaf may be piled in bulk to condition for a time before it is prepared for sale. The preparation consists usually of grading the leaf and putting it in a bale or package of convenient size and weight for inspection and removal by the buyer. Except during humid periods, the leaf must be conditioned in moistening cellars or humidified rooms before it can be handled without breakage. Type of leaf and local custom determine the fineness of grading. As its most elaborate, grading may be by position of the leaf on the plant, colour, size, maturity, soundness, and other recognizable qualities; flue-cured tobacco in the United States and Zimbabwe is graded this way and each grade bulked or baled separately. Much simpler grading is usual in developing countries, where the buyer is as much concerned with the proportions of each grade as with the quality of the entire lot; aromatic tobaccos are an example of this. Most tobaccos entering world trade, except the aromatic, are assembled before sale into bundles, or hands, of 15 to 30 leaves and tied with one leaf wrapped securely around the butts.

5.2 Most tobaccos, except aromatic and cigar, are regarded if necessary and usually redried after purchase; then the exact amount of moisture needed for aging is added and the tobacco is securely packed in cases or hogsheads. Exported tobacco is shipped in this form. The trend is for the packing factories to stem the leaf-that is, remove most of the stem leaving the lamina-usually by threshing machines but sometimes by hand, before redrying it. The aging process, particularly with cigar tobaccos, is sometimes hastened by forced fermentation procedures. After purchase, aromatic tobaccos are manipulated; that is, they are graded, baled, and subjected to an elaborate, in-the-bale, fermentation process before going to the ultimate manufacturer.

6. TYPES OF TOBACCO

There are seven major categories of tobacco, *viz.*L

i. Flue cured Virginia tobacco (FCV).
ii. Oriental.
iii. Bark flue cured.
iv. Sun cured.
v. Light flue cured cigar.
vi. Dark flue cured.
vii. Burley.

Flue cured virginia tobacco is mainly used for manufacture of cigarettes. Light air cured tobacco is used in the manufacture of bidis.

7. PROFILE OF INDIAN TOBACCO

7.1 A wide range of tobacco products-cigarettes, cigars, cheroots, bidis, hookah tobacco, chewing tobacco and snuff-are also produced in our country. The quantum of total production of tobacco (all varieties) has earned for India the third place among the world growers of tobacco, yet only 20% of the production is exported, the rest being locally consumed. The chief reason is that varieties like Virginia that are preferred by international buyers account for only about 25% of the total production. The rest of the production is, in the eyes of international buyers,

nondescript. A related reason is the low yield per hectare of the preferred varieties.

7.2 Following are the main varieties of tobacco grown in India:

7.2.1 Flue cured virginia (FCV) is easily the most important variety of tobacco grown in India. Largely used in the manufacture of cigarettes, this variety accounts for about 90% of the quantity exported by India annually. The pioneering efforts of the Imperial Tobacco Company were responsible for introducing in 1921 Virginia tobacco in Guntur district in Andhra Pradesh. Until 1929 when FCV was introduced, Sun-cured Virginia was the main produce. Today, the cultivation of FCV is mainly concentrated in the coastal districts of Andhra Pradesh. The transitional belt in Karnataka is also witnessing rapid development of this variety.

7.2.2 Quality of FCV is a highly complex concept, nebulous to the point of defying definition. In the ultimate analysis, the smokers are the best assessors of quality. The taste, the aroma, and the strength are what the smokers seek in tobacco. Smoking pleasure, however, is highly subjective, and by the same token difficult to measure. But the manufacturers cannot throw in the towel for that reason alone. They do require objective indices for assessing quality. It is here that the physical and chemical characteristics of the leaf assume significance. True, a nature's product like tobacco exhibits a wide variety of physical and chemical characteristics. Even so, research has made it possible to prescribe certain standard parameters of quality.

7.2.3 Broadly speaking, quality of FCV is a function of smoking quality and manufacturing quality. Smoking quality depends mainly on the chemistry of the leaf. The nicotine content, flavour and aroma, and burning characteristics are its main ingredients. The physical characteristics of the leaf such as the colour, maturity, body and texture are also relevant. Manufacturing quality is determined mainly with reference to the following considerations:

i. Whether the leaf, when shredded, gives reasonably long rags (small rags tend to fall out from the ends of the cigarette);

ii. Whether the leaf yields minimum quantity of dust and smalls, and maximum quantity of useable rag;

iii. Whether a given weight of cut-rags fills the cigarette as firmly as possible; and

iv. Whether the tobacco gives the maximum number of cigarettes of the required firmness per unit weight of tobacco.

Here, equilibrium, moisture content, porosity, elasticity, shatter-ability etc. are relevant.

7.2.4 Traditionally, FCV has been grown in black soils of the coastal districts of Andhra Pradesh. In fact, the image of the Indian FCV in the foreign markets had been built purely on the produce of black soil. In the recent past, however, international preference has shifted in favour of the produce of light soils, which, in turn, has caused a shift in cultivation from black soils to light soils. A distinction will therefore have to made between black soil and light soil tobaccos.

7.3 Bidi tobacco is the next important variety that is grown in our country. It shares about 25% of the total tobacco production in the country. Among the states growing this tobacco, Gujarat stands first. In Gujarat, the cultivation is concentrated mainly in Kaira and Baroda districts and to some extent in Mehasana district. The other important Bidi tobacco growing areas are Nipani in Belgaum district of Karnataka and parts of Kolhapur and Sangli districts of Maharashtra. The tobacco produced in Nipani area is considered to be stronger than that produced in Gujarat, Kurnool area of Andhra Pradesh is a newly developing bidi tobacco area. To a small extent, it is grown in the States of Rajasthan and Madhya Pradesh.

7.4 Cigar, cheroot & chewing tobacco— The South Tamilnadu districts of Madurai, Tiruchirapalli, Coimbatore and Salem districts

grow cigar filler, binder, cheroot and chewing tobaccos. The tanka tobacco produced on the islands of Godavari and Krishna rivers and the natu tobacco grown in Andhra Pradesh are utilised for manufacture of indigenous chuttas (Cheroots).

7.5 Cigar wrapper tobacco is currently grown on a very small acreage in Cooch Bihar district of West Bengal. The production in India is sufficient to meet the requirement of the domestic cigar industry.

7.6 Hookah tobacco—Desi, Vilayati, Motihari and Jati types of tobacco are cultivated in Muzaffarpur, Dharbhanga and Purnea districts of Bihar, and Cooch Bihar and Jalapaiguri districts of West Bengal. These types are also used for chewing and in the manufacture of snuff. Farukhabad in Uttar Pradesh is also an important area growing tobacco mainly for hookah and chewing purposes.

7.7 Traditionally the premier overseas buyer of Indian tobacco, the UK still maintains the lead, despite the recent downward trend in the quantum of leaf lifted by it. The UK is a selective buyer, and so is Japan, though it lifts a much smaller quantity. The strained political relations with China during the 60's and a greater part of the 70's brought tobacco exports to that country to a complete halt. After the lapse of about 20 years, China has started buying Indian tobacco though in small quantities. Imports by Eastern European countries have shown a steady upward trend, Russia taking the lion's share.

8. MARKET MECHANISM

8.1 The marketing of tobacco in India comprises of, marketing of higher varieties meant for exports and manufacture of cigarettes in India, and, marketing of the remaining varieties locally consumed in the manufacture of bidis, cheroots etc. The market for the higher varieties is better organized, attracts foreign buyers, and is based on a grading system. Further, the regulatory functions of the Tobacco Board in the field of marketing of flue-cured varieties have had a salutary effect on the marketing of those varieties. The bidi tobacco trade, on the contrary, is a free-for-all. Dalals and middlemen dominate. There is no grading system for bidi tobacco. Price is almost invariably dictated by middlemen

8.2 Marketing of the flue-cured tobacco involves the following main players:

i. The farmers who grow, cure, and rough-grade their crop on their own account.

ii. small dealers, with or without packing facility, who buy, process, pack & sell tobacco to exporters and to the domestic cigarette manufacturers.

iii. Domestic manufacturers of cigarettes.

iv. Exporters who buy, grade, redry, pack and sell tobacco to overseas buyers.

At times, the STC enters the market and buys tobacco and, on such occasions, the associates of the STC also join the ranks of the buyers.

8.3 Small dealers are for the most part growers themselves. They maintain warehouses, and a few of them have redrying and packing facilities also. Out of business considerations or at least for reasons for economy, they buy tobacco from fellow growers in their locality. The local growers, on their part, prefer to sell their produce to the small dealers in their locality, because, in the process, they are able to avoid the risk and expenses involved in the direct selling of tobacco to manufacturers/ exporters. The small dealers number about 200. They make own arrangements for finance, institutional as well as individual. They, in turn, often help the local growers with some assistance in cash or kind (e.g. fertilizers).

8.4 The three biggest Indian manufacturers who take roughly a quarter of the flue-cured crop each year for their own factories are the Indian Tobacco Co., National Tobacco Co. (now a subsidiary of the Duncan Group), and the Golden Tobacco Co.

8.5 There are about 35 exporters of substantial size and stability, mainly in and around Guntur. Family and owner-managed business predominate; few are corporate enterprises. They have large scale redrying and packing facilities, and long-established contacts with foreign buyers. Late in January each year markets open, and well before that time the larger buyers setup in the tobacco districts of A.P. Some 150 of their own buying depots, locally called purchase platforms. These buying courts each usually consists of a thatched, open-sided, temporary shed, a makeshift office, and a small storage shed. Traditionally, ILTD has been providing the lead in buying. That is to say, ILTD inaugurates the buying and the rest follow suit. The pioneering role that ILTD had played in the past in the field of tobacco, its organised bigness, and more importantly, its insight into the local production trends, quantity wise as well as quality wise, coupled with its intimate knowledge of the current preference of international buyers-all these factors have been instrumental in placing the mantle of leadership on ILTD.

8.6 When the farmers come to know that buying is about to start, they bring their bales of produce to the buying courts and display them on purchasing platforms. There the purchaser's representative, known as "buyer", opens each bale, assesses its over all quality composition by sight and smell and keeping in view the proportions of each required grade contained in the bale, offers a price which is usually accepted. Some buyers never bargain; others haggle with farmers in search of an agreed figure.

8.7 As a general rule, the price offered by the buyers is accepted by the farmer. For more reasons than one. Firstly, the farmer who is dissatisfied with the price offered is technically free to take his produce to the purchasing platform of another purchaser, but there is no certainty that he will get a better price. There is, again, the expenses to be incurred in shifting the produce from one platform to the other, and the incidental delay in making the sale and realising the proceeds. Secondly, purchasers normally provide farmers with cash advances and/ or inputs like fertilisers, and consequently a farmer is more or less obliged to sell his produce to a particular purchaser. Thirdly, many farmers grow the crop with a particular purchaser in view, and the purchaser encourages such stable relationship with farmers who regularly produce good tobacco grown by selected farmers, ensuring for themselves an assured source of supply, and for the farmers an equally assured avenue of sale.

8.7.1 As each bale is bought, it is weighed, the amount due to the farmer (less advance if any) calculated, and purchase voucher prepared. Generally, only a part of the money due is paid on the spot, the rest being deferred to later dates. This is particularly true of smaller purchasers.

8.7.2 Purchasers, as suppliers, no doubt plan their buying keeping in view the order they have in hand. But farm grading, as pointed out above, is not in line with manufacturers grade. With the result the purchaser gets a clear picture of what he has purchased only after he gets the leaf graded in his factory. Often, he finds that he has not purchased sufficient quantities of the required grade of leaf. There is therefore a good deal of inter-purchaser buying and selling, designed to make up shortfalls in certain grades, and dispose of surpluses in others.

8.7.3 The Indian farmer has traditionally been grading the leaf on the basis mainly of its colour. Historically also, for reasons which have lost some of their relevance, Indian Leaf was valued for its colour. Colour is fleeting; it must be fixed quickly by re-drying. This is one reason why the marketing season lasts barely two months.

9. PROCESSING OF TOBACCO BY PACKERS

9.1 On the conclusion of sale, tobacco is transported to factories for further processing. In as much as farm-graded tobacco is a mixed bag, it will have to be graded again so as to confirm

to the requirements of overseas buyers or, as the case may be, domestic manufacturers. For this purpose, the Agmark grade specifications prescribed by the government of India are followed. Factory grading is done manually by women labourers in halls fitted with humidifiers. There women sit in lines and grade tobacco. Ungraded tobacco is brought to them in line and graded tobacco collected from them by a separate set of labourers. Mistries supervise work.

9.2 The next operation is stripping which consists in the removing the midrib of graded leaf. If the buyer so desires, graded leaf can be straight away be redried and packed. However, the bulk of the orders, especially those emanating from the UK buyers, are for strips. The leaf is stripped manually by women workers. Stripping operations are also conducted in halls fitted with humidifiers. The aim is to prevent the leaf from becoming brittle owing to excessive drying. A veritable army of labourers, scrap collectors, sweepers, table checkers, line boys, line maistries and head maistry take part in the operations. Stripping does not mean total removal of the midrib, leaving a split leaf. In normal stripping 60–65% of the mid rib is removed. At times, buyers may direct that special stripping be done in which case more than 90% of the midrib is removed. Special stripping is an expensive operation; needless to add, loss on stripping will be more in special stripping. Ordinary stripping yields, on an average, 73–75% of strips, while the out turn in special stripping is 67–69%. The strips are sand-screened next so as to free them of sand and fine scrap. For this purpose specially designed drums are filled with the strips, and rotated with the help of power. High speed rotation separates sand and fine scrap from the strips.

9.3 Redrying plays a vital role in the processing of tobacco for packing and storing, its significance lying in the fact that it regulates the moisture content of tobacco. It is by controlling its moisture content that tobacco is put into comparatively safe keeping condition. At the time of purchase, FCV normally contains about 15% moisture some of which is lost during grading and stripping operations. Still, the strips will have to be redried. Selective buyers like the UK and Japan clearly specify the desired moisture level which varies from 10.25 to 11%. Redrying entails the drying of the strips in successively higher temperatures ranging from 130–170 degrees F, and cooling them to temperatures varying between 95 and 110 degrees F, holding all the while the moisture at predetermined level. The modern redrying machine consists, in the main, of a series of compartments, usually 3 or 5, through which the strips are passed by means of an apron type of conveyor. As tobacco passes through the compartments it is gradually heated up, and then cooled down to predetermined temperatures, depending, of course, on its type and grade. Right through the process, the moisture level is carefully controlled. At the end of the process, the strips come out in a warm condition and with the desired moisture content.

9.4 The redried strips are straight away packed in bales or cases as required by buyers. It will be interesting to note that over all cost considerations weigh heavily with overseas buyers then they prefer one type of packing to the other. The cost of packing materials apart, factors such as the reuse potential of the packing material (after the package is opened) are also taken into account by them. For instance, certain overseas buyers specify that tobacco should be packed in plywood cases. Now, plywood cases are more costly than ordinary wooden cases, and much more costly than gunny or burlap packing. Enquiries revealed that the overseas buyers had certain plans for reusing the plywood cases, and that it was more economical for them to obtain plywood this way. This small highlights how cost conscious overseas buyers are.

9.5 Packed tobacco is then sold to local manufacturers of tobacco products or, as the case may be, exported. Tobacco meant for export should invariably be inspected and graded under

Government of India's Agmark scheme. After inspection and grading, Agmark slips indicating the grade of tobacco that is exported are pasted on the packages. No package can be exported without Agmark specifications.

9.6 Export: The mode and mechanics of exporting tobacco and realising the proceeds, in its essentials, is no different from that of exporting any other commodity. The mechanics of export and import business has been dealt with elsewhere in this volume, and hence it is not proposed here to repeat it.

9.7 The system of inspection and grading under Government of India's Agmark scheme of tobacco meant for exports has already been touched upon. This system has created confidence in international market for Indian tobacco. Government's regulatory intervention in the field of export prices for each Agmark grade is a related and, indeed, complementary matter. With a view to ensuring that Indian tobacco does not get a short shrift in international markets, Government of India each year fixes, in consultation with the Tobacco Board, the Minimum Export Prices (MEP) for each grade. No export can be invoiced at prices less than the MEP fixed for each grade. Each year a public notice is issued by Government of India indicating the MEP fixed for each group.

9.8 Certain incentives are also given by government to promote exports of Indian tobacco. These take the form of licenses to import specified goods from abroad, goods that are inputs in the tobacco export trade. Gerrad wire needed for packing, spares for machines used in processing tobacco and the like, are covered by the licenses. The value of import licenses is 3% of the value of Indian tobacco exported. Generally, the exporters sell the licenses at a premium of 25–30%.

9.9 At the non-governmental level, the role played by the so called 'London Merchants' in the export trade of Indian tobacco deserves mention. The UK manufacturers, who lift a valuable slice of the Indian flue-cured crop each year, do not make direct purchases in India. Apart form what they buy from ILTD they place orders with more than a dozen leaf merchant companies incorporated in UK, who in turn obtain their requirements from Indian suppliers with whom they have close and often long-standing relations. Senior men from these merchant houses go out to Guntur each year to watch the sales, give their suppliers help and guidance in all aspects of handling, packing and exporting, sometimes helping with capital and modernisation, and generally acting as a two-way link between the original buyer and the ultimate manufacturer. The larger of these merchants also sell Indian tobacco in many other markets and, in effect, have become an export development arm of the Indian industry.

10. EXAMINATION OF ACCOUNTS

10.1 Growers, small dealers, domestic manufacturers of cigarettes, and exporters constitute the organised sector of the Indian tobacco market. Domestic manufacturers of cigarettes buy mainly from growers and to a small extent from dealers. Small dealers buy tobacco from growers, and either process it in their own factory or get it processed on commission basis at other factories. They sell the processed tobacco either to domestic manufacturers or to exporters. Exporters buy tobacco, process and export it to foreign countries. They may at times make small sales to domestic manufacturers.

10.2 Verification of purchases-In the case of agricultural produce like tobacco, or rice, verification of purchases is more than ordinarily difficult. Firstly, farmers do not maintain books of account, and hence there is no scope for cross verification. Secondly, the purchases are investigated usually after the lapse of 2–3 years, and consequently, what passes for verification is nothing more than a test of the farmers' memory. Thirdly, in the case of tobacco particularly, the absence of a precise grading system confounds the situation. Farm grading is inexact, and each

bale bought for sale by farmers is almost unique in respect of proportion of the various grades of leaves it contains. The result is that not only the price offered for each bale varies but, more importantly, a comparison of the prices does not take us any farther than the truism that the difference in the price is attributable to the difference in the quality of the leaves purchased. What is worse, there is no means of verifying whether the truism is true in a given case, because at the time of sale the exact proportion of the various grades of leaves contained in a bale is nowhere recorded, as it is not known. Fourthly, the TLPV system is no doubt designed to combat malpractices at the time of purchasing tobacco from farmers. It is, nevertheless, well worthwhile to remember that a system is only as good as those who operate it. Even the most meticulously designed system is no insurance against manipulations which may subvert and ultimately destroy the system.

10.3 The vouchers evidencing the sale of tobacco are invariably prepared by the purchasers themselves. In the best of circumstances, farmers are only interested in getting the agreed price as quickly as possible. It is not uncommon for the purchasers to obtain the signatures of the farmers on blank voucher forms and to fill them in later. Here, the price of tobacco may be inflated. To match the inflated price, the quality of the leaf may also suitably be manipulated. Such manipulations may be done in respect of not only tobacco purchased by the assessee firm in its own name, but also of tobacco purchased and sold benami. In a case where search and seizure operations were conducted, it was seen that the assessee firm had transacted large volume of business with the STC in benami names. Tobacco was purchased ostensibly by a syndicate of small brokers, and sold to the STC. The value of the tobacco was also ostensibly received by the syndicate directly from the STC, and deposited into bank accounts operated by the syndicate. In the course of the search, blank vouchers signed by agriculturists, and blank cheques signed by the members of the syndicate were seized from the assessee's premises. It was revealed that tobacco was purchased and sold to STC by the assessee but in benami name of the syndicate. Blank vouchers obtained from the farmers were meant for overstating the purchase price, so that the syndicate itself could understate its profits. Blank cheques signed by the members of the syndicate were meant to enable the assessee-the real owner-to draw the moneys deposited into the bank accounts ostensibly standing in the name of the syndicate and its members.

10.4 Usually dealers and packers advance moneys and other inputs such as fertilisers to farmers, the advance being adjusted at the time of paying the value of the tobacco purchased from the farmers. The manner in which the farmers accounts are settled need to be examined closely. In case of cash advances, it must be seen whether, on the relevant dates, the dealer had sufficient funds in his possession. In case of advance of inputs, it must be seen whether, on the dates on which the inputs were purchased, the dealer had sufficient fund in his books of account, and whether he had accounted for the entire purchases.

10.5 It was observed in a case that some close relatives of the assessee had ostensibly advanced moneys to farmers and had obtained promissory notes from them. It was explained that the advances had been made from out of the agricultural income of the relatives. Investigations revealed that the:

i. Relatives did not earn sufficient agricultural income, and whatever agricultural income they earned had already been credited to their accounts in the books of the assessee;

ii. Advances had not been made in cash as alleged, but in kind, i.e. fertilisers;

iii. Fertilisers supplied to the farmers had been purchased with the assessee's funds; and

iv. Purchase of the said fertilisers had not been accounted for by the assessee.

10.6 At times, the dealer may claim that the advance given by him to farmers has become bad and irrecoverable. While investigating this claim, it will be useful to find out from the Tobacco Board whether the farmers in question continue to grow tobacco under licenses issued by it. The bank accounts opened by the farmers under the TLPV system will also reveal whether the advances could be recovered or not.

10.7 An important question is whether the price paid for the produce is reasonable, having regard to its quality. It is not difficult to answer the question in cases where the produce is classified into precise grades of quality. Superior quality is costlier than inferior quality. If, in a given case, a higher than normal price is alleged to have been paid, that fact by itself will indicate the need for further investigation. By comparing the price paid by other dealers for the grade in question, and by correlating the purchases and sales of each grade, it may be possible to establish inflation in purchase price. In the case of tobacco, however, a direct correlation between the price paid and the produce purchased is not possible. The reason is that farm grades do not conform to manufacturers' grades. It is nevertheless possible to attempt a rough correlation between the two sets of grades. It must at once be added that the correlation is so broad that, in the best of circumstances. It is nothing more than a pointer to the need for further investigation.

10.8 The farm grades are labeled-IV, 2V, 3V, 5V, 6V and 8V. Agmark grades as standardised by government are-1, 2, 3, 4, 5 or LBY, LBY2, Brown DB & LG etc. Farm grade tobaccos, when graded again in factories, are expected to yield certain percentage of export grade tobaccos. The following table indicate percentages of expected yield:

Table 1

Farm Grade	Corresponding Agmark Grades	Approximate of Percentage Agmark Grades
1-V	Grade 1 to 4	65–70% (North & Central)
	Grade 1 to 4	50–60% (South)
	Grade LBY	10–15%
2-V	Grade 4	25–35%
	Grade LBY	35–40%
	Grade LBY2	20–25%
	Grade B	10%
3-V	Grade LG	65–70%
	Grade LMG	20–25%
	Grade MG/ DG	10%
5-V	Grade B	30–40%
	Grad DB	30–40%
	Grade PL	30%
6-V	Grade LMG	20–25%
	Grade MG	40%
	Grade DG	35–40%
8-V	Grade PL	50–75%
	Grade DB	20–25%
	Grade DG	5–25%

It may be possible to see generally whether the price paid is reasonable with reference to the yield of export grade tobaccos actually obtained.

11. LOSS OF STOCK

11.1 Certain losses, visible and invisible, occur in the course of handling and processing of tobacco. Invisible loss arises because of driage and loss of moisture. Visible loss occurs on account of the by-products obtained while processing tobacco. The usual by-products *viz.* scrap, bits and stems are not losses in the real sense, because they are salable.

11.2 Normally, the losses are of 3 types *viz.*, (i) grading, stripping and sand-screening losses; (ii) redrying loss; and (iii) tobacco that is unfit for human consumption. As long as tobacco leaf was subject to excise duty, Central Excise Department used to verify and certify the losses reported by the dealers. Today, the leaf is not subject to excise. Hence the reasonableness of handling and processing losses must be verified. Here, the records maintained by the dealers and packers for internal control may be usefully examined.

11.3 The loss or shortage that occurs while grading the leaf in factories can be ascertained from grading operation reports prepared by the factories. These reports indicate the number of bundles and the weight of tobacco issued for grading, and the weight of leaf obtained under various export grades. In format and content the reports may vary from dealer to dealer, but they invariably contain enough basic data to enable one to work out the loss in grading. The weight of tobacco issued for grading, and the weight of leaf obtained on grading may be, if necessary, checked with the details in the weighment report register.

11.4 Similarly, the loss on stripping and sand-screening may be worked out from the factory reports on these operations. The quantity of stems, scrap and chura (tobacco dust) obtained in the operations are recorded in the reports. Scrap and chura are sold to bidi manufacturers. Previously stems were discarded. Nowadays the stems are flattened, shredded, and used as cigarette filter. It must be seen whether the moneys realised on the sale of these items have been accounted for.

11.5 Loss on redrying is an invisible loss, being the result of the loss of moisture that occurs during the process. The extent of loss on redrying will naturally depend on the specifications given by overseas purchasers or domestic manufacturers. The redrying loss claimed must be checked with reference to the redrying operation reports prepared by factories. Following table gives approximate average loss occurring at the various stages of processing tobacco:

Table 2

Stage	Visible Losses%	Invisible Losses%
Grading–scrap and bits	2.9	1.5
Stripping–stems	20.0	0.5
Scrap & bits	1.0	0.5
Sand screening–for sand & dust (for export to UK)	0.5	0.5
Redrying–scrap	2.5	3.5
Total	26.9	6.5

12. The percentages vary from packer to packer, depending upon the quality and grade of tobacco processed, the efficiency of handling and processing the leaf and so on.

Charges for grading, stripping etc.

The verification of the expenses claimed under these heads is no different from the verification of other expenses. In tobacco cases, however, it is possible to verify the claim from another angle. Small dealers not owning factories get their tobacco processed and packed in other factories on a commission. When a factory

owner undertakes to process and pack tobacco for others he naturally expects to earn a profit for himself, and consequently the profit element is built into the rates quoted by him. Therefore, the cost of processing and packing a unit of his own tobacco must be less than the rate charged by him to process and pack a unit of tobacco belonging to others. If the unit cost of processing and packing assessee's own tobacco is higher than the rates charged by him for others, that fact will per-se indicate the need for further probe. It will therefore be worthwhile to compare the assessee's unit cost with the rates charged by him for handling the tobacco belonging to others. Variations, mostly marginal, are bound to be there between packer and packer, as also from year to year. The major determinant of cost is the wages paid to labour.

13. FOB EXPENSES

The export price of tobacco is normally quoted on FOB basis, the exporter being responsible to meet the connected expenses. It often happens that dealers having stocks of particular grades of tobacco do not have on hand any export orders and vice versa. The problem may be solved by means of inter-dealer sales. Alternatively, dealer 'A' having stocks of the required tobacco may execute orders secured by dealer 'B' who is unable to execute the orders as he does not possess stocks. In such a case, the exports will be made in the name of 'B' who has secured the export order. 'B' will usually incur the FOB expenses and recover them from 'A'. In 'B's case, therefore, there can be no question of allowing FOB expenses in respect of the orders executed by 'A'. As a general rule, therefore, the first step should be to collect the details of the export orders secured by the assessee, categorize these into those relating to the export orders executed by him on his account, and those relating to the export orders which he had permitted others to utilise. The details will help not only in examining the expenses claimed by him but also in handling the cases of the other dealers.

14. SALES

14.1 Three types of sales can be visualized, *viz*, sale to domestic manufacturers of cigarettes, inter-dealer sales, and exports. The first two types of sales can be verified by cross checking the purchasers accounts in the books of account of the suppliers and the suppliers account in the books of account of the purchasers.

14.2 Most of the processed FCV is exported, and hence export sales must be critically examined. Here, two modes of exports, *viz.*, outright sale, and sale on consignment basis, deserve notice. In both the types of sales, it must first be examined whether, having regard to the grade of FCV exported, the invoiced prices are in accord with the minimum export prices fixed by the government. As regards consignment sales, the transactions should be scrutinized with reference to both the initial pro forma invoice (prepared at the time of sending the goods for sale on consignment basis) and the final invoice prepared on conclusion of the sale.

14.3 Tobacco cannot be exported without first being inspected and graded under the Agmark scheme. Hence, the Agmark grade awarded to each bale exported, and the MEP fixed for each grade are useful indices in the matter of verification of sales. This is however not to say that overseas buyers invariably accept the Agmark grades, or that they do not pay more than the MEP fixed for each grade. Overseas buyers, at times, down grade tobacco and at other times, pay a higher price than the MEP. In such cases, the circumstances surrounding the transactions must be examined closely.

14.4 Particularly in cases in which a higher price than the MEP is paid, the matter needs to be investigated from the point of view of possible under invoicing. For example, MEP fixed for redried strips of Agmark grade 4 is Rs. 2062 per 100 kg, FOB, packed in bales. Suppose an overseas buyer paid Rs. 2162 for that grade of tobacco. One possibility is of course that the grading was strict and that

the overseas buyer was prepared to pay a fair price for the goods. Another possibility is that the tobacco was really of Agmark grade 3 (the MEP for which is Rs. 2238) but was deliberately downgraded and under-invoiced by Rs. 76 per 100 kg. It is extremely difficult to decide whether, in a particular case, such manipulations have been done.

15. CLOSING STOCK

15.1 Tobacco is exported mainly on consignment basis. The stock at the end of the year of account, therefore, comprises the stocks lying in the country and those lying with the overseas consignees. The basis of valuation of each grade of tobacco lying in stock in India and outside must be scrutinized.

15.2 Merchants buy farm grade tobaccos, grade them again in their factories and export them. Since farm grades do not match manufacturers' grades and since overseas buyers lift superior grades only the traders are normally left with unexportable grades of tobacco. Such grades are valued at lower rates. However, it is essential to guard against the superior grades lying in stock at the end of the year being passed off as inferior grades and valued at lower rates.

15.3 MEP fixed by government may usefully be adopted as a basis for valuing stocks lying with overseas consignees. As for local stocks, the last sale price or the market price obtaining immediately after the close of the year of account are useful indices.

16. INDIAN CIGARETTE INDUSTRY

16.1 The popularity of tobacco smoking as a daily pleasure has, over the years owed much to the conversion of the cured leaf into convenient form for use by the consumer. True, the blending of various grades of leaves, the addition of aromatic substances and the like do enhance product appeal. But it is the convenience of the customers and ease of dispensing by merchants that is the major factor. Here, cigarettes lead the rest. The advent of efficient cigarette making machines and improved blending techniques have made the phenomenal growth of cigarette trade possible the world over.

16.2 India occupies 10th position among world cigarette manufacturers, with an annual production of 68.5 billion pieces. Indian cigarette manufacturers consume about 20% of the tobacco produced in the country. Nevertheless, India's share in world cigarette production is less than 2%. In Asia, it stands second to Japan whose production is nearly three times more than ours. It's share in world export market is negligible.

17. MANUFACTURE OF CIGARETTES

17.1 The processed leaf is first allowed to age or to mellow so as to render it fit for consumption. When the leaf is ready for manufacture, certain hygroscopic agents such as glycerin are added to it in small quantity so as to maintain its moisture content at the proper level. It is absolutely essential to regulate the moisture content throughout the several stages of manufacture. If the leaf is too dry, the flake or filler will drop out of the open ends of the cigarette; if too moist, the cigarettes will deteriorate rapidly and its smoking quality will suffer.

17.2 Thereafter, certain sweetening, flavouring and casing agents are added to the leaf. The variety and quantity of the materials employed vary and are trade secrets.

17.3 Blending of leaves is easily the most important factor in cigarette manufacture. There are many reasons why blending has come to stay. First, tobacco leaves come in all types and grades, each type or grade exhibiting particular quality or qualities. No type or grade of leaf however possesses all the qualities which contribute to the ideal finished product. For a fact, various types or grades of leaves possess opposing qualities. It is through blending that the desired qualities are harnessed and heightened. Secondly, smokers'

preferences are varied. Some prefer aromatic tobaccos, some light tobaccos, and some others strong tobaccos. The varied tastes can be catered to only through blending. Blending is very much a balancing act, designed to obtain in the finished product a favourable combination of the desired qualities. Thirdly, consumer preference manifests itself in the form of preference for a particular brand or brands of tobacco products. And the consumer naturally expects his brand to remain, quality wise, substantially the same year after year. But the weather conditions change from year to year, producing marked variations in the characteristics of the tobacco crop produced in a locality. The yearly variations in the quality of the leaf pose a big hurdle in maintaining, the quality of the product. Manufacturers overcome this by carrying sufficient stock of leaves of particular varieties, and by blending them in desired quantities. The fourth reason, is that blending enables manufacturers to mix inferior grades of tobacco with top grade leaves, and to sell the product on the strength of the latter. It must however be added that as long as the inferior grades of leaf have some qualities to contribute to the blend, no objection could possibly be taken to such a practice.

17.4 The leaf blend is then fed into the cutting machine which shreds the leaf into strands somewhat less than 1 mm wide. The shredded leaf is then dried to the desired moisture level, varying from 12–13%. Special flavours are added if necessary. After about 24 hours the material is fed into the cigarette making machine which turn out upto 4,000 cigarettes a minute. Normally a battery of such machines are operated simultaneously. The cigarettes are then packed mechanically. Packing machines can pack upto 5000 cigarettes per minute.

17.5 The demand for cigarettes today is enormous. It can be met only with the help of sophisticated machines designed to operate on a large scale, and high speed. The entire process of cigarette manufacture is highly mechanised. Equipment in the primary area includes tobacco bale loosening machines, preconditioning and casing equipment, automatic blending and shredding machines etc. Then there are the cigarette makers, soft packers, cellophane wrappers and cartoners, duplex packers and wrappers for shell-and-slide packers.

17.6 Cigarettes are subject to excise duty. The excise authorities exercise close control over the entire process of cigarette manufacture through the registers and statements prescribed under the Excise Act. The details contained in these registers and statements is of great help. The fines, compounding fees etc. levied by the Excise authorities for violation of Excise regulations give useful clues in the matter of detection of suppression of output and income. The circumstances leading to the levy of fine/ fees, therefore, merit close and critical study.

18. CASE STUDY—MANUFACTURE OF CIGARETTES

18.1 Some companies engaged in manufacture of cigarettes in India also manufacture popular foreign brands of cigarettes under license agreements. In some of the cases royalty is to be paid and in some cases no royalties are provided. In one case, an Indian company, engaged in manufacture and sale of cigarettes, entered into license agreement with a foreign company for their popular brand "Rothmans" cigarettes vide agreement dated 09/8/1987. Under this agreement, the assessee was allowed to manufacture and sell Rothmans cigarettes in India for five years. As per Para 6 of the agreement, the licensee had the sole agency in India for the manufacture and sale of the said brand in Indian market. As per Para 11 no royalty or fees was payable by anyone. Further, there were no stipulation regarding the selling price of cigarettes. The agreement provided for maintaining quality of production and inspection etc.

18.2 During the assessment, it was noted from the computation of income filed with the return of income, the assessee had reduced an amount of Rs. 26,20,500/- from total income, as capital receipt because of non-renewal of license from the foreign company. It was submitted that as there was loss of source of income the amount of Rs. 26,20,500/- was not taxable even though it was shown as revenue receipt in the Profit and Loss Account.

18.3 The AO, after examining the facts of the case and terms and conditions of the agreement, held that the amount cannot be treated as a capital receipt for the following reasons:

i. The assessee is a full fledged and exclusive agent of M/s Rothmans.

ii. The compensation received by the assessee is deemed income liable to tax under Section 28 (ii) (b) & (c) r.w.s. 2 (24) (v) of the Act.

iii. The compensation is liable to tax under Section. 40 (i) r.w.s. 2 (24) (v) of the Act, as deemed income being recoupment of an allowed loss for expenditure.

iv. The compensation can be treated as business income under Section 28 (ii), and

v. As per Section 2 (13) business includes any trade, commerce or manufacture or any adventure in the nature of trade, commerce or manufacture.

19. MANUFACTURE OF BIDIS

19.1 India accounts for over 85% of the world's bidi tobacco production, the balance being produced by Nepal, Bangladesh, Pakistan and Sri Lanka. The Indian bidi industry is a major cottage industry. It employs more than 3.5 million unskilled and mainly rural workers. The annual wage bill of this industry is around Rs. 250 crores. Unlike FCV which is export-oriented, bidi tobacco is primarily used for domestic consumption. Bidi tobacco forms about 35% of the total tobacco production in the country. Gujarat, Maharashtra and Karnataka produce most of the bidi tobacco grown in India.

19.2 The Indian bidi tobacco market, unorganised as it is, is dominated by private trade. Bidi tobacco is mostly sold in the villages. The traders purchase processed tobacco or even the standing crop, through their 'dalals'. In a normal year, when there is no glut in bidi tobacco, buyers from towns approach farmers through local dalals, and the farmers indicate the price which is ultimately settled through negotiations. But in years of glut, the farmers have to move from dalal to dalal beseeching them to purchase the produce. The growers are then at the mercy of the dalal or trader who fixes the terms and conditions of purchase.

19.3 Though bidi tobacco falls under the pale of the Agricultural Produce Marketing Act, in actual practice, thanks to the tardy enforcement of the Act, bidi tobacco marketing is plagued by certain practices and conventions which are loaded heavily against the grower. Weight discounts at the rate of half to one kg per 20 kg of produce, and cash discounts ranging from 30% to 15%, though illegal, are common. The growers' accounts are never settled immediately after the delivery of the produce, delays ranging between three months to three years being very common. No interest is paid to the growers on the delayed payments. Again, at the time of settlement of account, the amounts due to the farmers are rounded off invariably to the next lower hundred of thousand, the sums thus withheld being treated as "bakshish". (For example, if he owes the farmer a sum of Rs. 871.25 the trader will pay Rs. 800; and if he owes Rs. 1109.60 he will pay the farmer only Rs. 1000). The net result of these unhealthy practices and conventions is that growers get only 70 to 75% of the value of the tobacco sold by them.

19.4 The two major inputs of bidi manufacture are bidi tobacco and tendu (kendu or timru) leaves. The manufacturing process is very simple. Tendu leaves are first soaked in water, and then cut into rectangular bits. Bidi tobacco (normally a blend of two or three varieties of tobacco) in the form of strips or flakes is placed on the leaf which is then rolled by hand, and tied with a slender string. Both ends of the roll are tucked in to prevent the filler tobacco from dropping out of the bidi. The raw bidis are then carefully baked in 'bhattis' (ovens) to make them dry and stiff. The heat treatment also helps in preventing the deterioration and decay of the tendu leaf in the bidi. Thereafter, the bidis are packed in bundles of 10 or 20 pieces each, labeled, packed, and marketed.

19.5 Bidi manufacturers purchase tobacco from merchants/ commission agents. Tendu leaves are either purchased from merchants/ commission agents, or collected from the forests taken on lease by the bidi manufacturers. One or more of the following methods are generally adopted to manufacture bidis:

i. The workers employed by the manufacturer roll bidis in the factory owned by the latter;

ii. The workers employed by the manufacturer roll bidis in their own homes;

iii. Commission agents/ contractors receive the inputs from the manufacturers, employ the workers, and get bidis made by them.

It is not unusual for manufacturers to buy bidis from smaller producers also.

20. EXAMINATION OF ACCOUNTS OF BIDI MANUFACTURERS

20.1 Bidis, whether marketed under a trademark/ label or not, are subject to excise levy. Unlabelled bidis attract lower rate of duty than labeled bidis. The Central Excise Authorities naturally exercise important checks on bidi manufacture. An AO should be aware of the nature and extent of the checks exercised and the information that bidi manufacturers are statutorily obliged to furnish to Central GST department. A brief resume of the role of Central GST Department in the bidi trade provides a convenient entry point to further discussions.

20.2 Every registered person shall keep and maintain, at his principal place of business, as mentioned in the certificate of registration, a true and correct account of—(a) production or manufacture of goods; (b) inward and outward supply of goods or services or both; (c) stock of goods; (d) input tax credit availed; (e) output tax payable and paid; and (f) such other particulars as may be prescribed: Provided that where more than one place of business is specified in the certificate of registration, the accounts relating to each place of business shall be kept at such places of business: Provided further that the registered person may keep and maintain such accounts and other particulars in electronic form in such manner as may be prescribed. (2) Every owner or operator of warehouse or godown or any other place used for storage of goods and every transporter, irrespective of whether he is a registered person or not, shall maintain records of the consigner, consignee and other relevant details of the goods in such manner as may be prescribed. (3) The Commissioner may notify a class of taxable persons to maintain additional accounts or documents for such purpose as may be specified therein. (4) Where the Commissioner considers that any class of taxable person is not in a position to keep and maintain accounts in accordance with the provisions of this Section, he may, for reasons to be recorded in writing, permit such class of taxable persons to maintain accounts in such manner as may be prescribed. (5) Every registered person whose turnover during a financial year exceeds the prescribed

limit shall get his accounts audited by a chartered accountant or a cost accountant and shall submit a copy of the audited annual accounts, the reconciliation statement under Sub-section (2) of Section 44 and such other documents in such form and manner as may be prescribed. (6) Subject to the provisions of Clause (h) of Sub-section (5) of Section 17, where the registered person fails to account for the goods or services or both in accordance with the provisions of Sub-section (1), the proper officer shall determine the amount of tax payable on the goods or services or both that are not accounted for, as if such goods or services or both had been supplied by such person and the provisions of Section 73 or Section 74, as the case may be, shall, mutatis mutandis, apply for determination of such tax.

20.3 The above records contain important information which could be utilised for investigating the cases of bidi manufacturers. The AO should not make the facile assumption that an assessee will ensure that the books of accounts he produces before Income-tax authorities are in consonance with the Central Excise records. He should invariably examine the books of accounts of a bidi manufacturer in the light of the information contained in the Excise records.

20.4 In one case, it was found that the stocks of tendu leaves pledged by the assessee with the bank were substantially higher than those accounted for in the books. The assessee's explanation was that the excess stocks pledged with bank belonged to the contractors who were regularly supplying bidis to him. Upto this point, the case proceeded on conventional lines. The break came, when a close analysis of the information contained in the Central Excise records, relating to receipts and issues of tendu leaves, belied the assessee's explanation. The concealed income detected was confirmed by I.T.A.T.

21. PURCHASE OF TOBACCO

21.1 The manufacturers generally purchase tobacco from merchants or through commission agents. Some manufacturers purchase the tobacco crop itself, and get is processed. In the former case, a copy of the assessee's account in the books of the merchants/ commission agents must be obtained and verified with the books of accounts of the assessee. While doing so, both the movement of the goods and the flow of cash must be scrutinized critically. Antedating/ postdating of cash payments is the convenient method adopted to disguise the payments made from out of moneys kept outside the books. The cross-verification must be geared to detecting such disguised payments. Similarly, by tracing the movement of goods (i.e. the date of receipt of tobacco by the assessee), the AO will be able to detect whether the assessee had been keeping stocks outside the books. To elucidate-the assessee might claim that a certain consignment of tobacco weighing, say, 200 kg was received by him on, say, 15/09/1980, and might, on this basis, seek to show that he had sufficient stocks to issue to the workers during the period 15/09/1980, 20/09/1980. A close verification of movement of the goods might reveal that the consignment in question was in fact received on, say, 21/09/1980, and that but for the said 200 kg which the assessee had accounted for on 15/09/1980, he would not have had sufficient stocks to issue to the workers. In such circumstances, it will be reasonable to conclude that the assessee had utilised his undisclosed stocks during the period 15/09/1980 to 20/09/1980.

21.2 Cross verification of the books of accounts of the assessee with those of the merchants/ commission agents may help in detecting bogus or hawala entries made in purchase a/c, with a view to inflating the purchase price of tobacco. In cases where the assessees purchase tobacco from the growers, verification of purchase is very

difficult. Yet it is these cases that afford a lage scope for manipulation.

21.3 A search conducted in a case revealed that the assessee had made huge purchase of tobacco but accounted for only a part of it. It was found that the assessee had misused the permits issued by the Central Excise Authorities. Normally, each permit authorises the holder to transport once, and only once, the quantity of tobacco specified therein from point A to point B indicated in the permit. In the instant case, however, the assessee had utilised the permit to transport tobacco by lorries twice. He did not disclose the quantity of tobacco thus illegally transported. It was also noticed that the assessee had inflated the purchase price of tobacco (accounted for in his books) to the extent of Rs. 150–250 per baram (a local unit of 265 kg)

22. PURCHASE OF TENDU LEAVES

22.1 Cost of Tendu leaves is one of the main components of cost of production of bidis. The main problems in the assessment are:

i. Whether the rates of purchase are reasonable.

ii. Whether all the purchases have been accounted for.

iii. Whether the consumption of the leaves is reasonable.

22.2 Tendu leaves are a forest produce. The Forest department of the concerned States each year lease out to contractors the right to pluck the leaves from clearly demarcated areas of the forest. In Andhra Pradesh such rights go under the name of 'coupe'. The name of the area over which the right is exercisable is added as an adjectival prefix to the word 'coupe' e.g. Begumpet Coupe, Bhainsa Coupe etc. The lease rights are generally auctioned. The procedural details vary from State to State. The AO should acquaint himself with the procedure followed in the concerned State.

22.3 The Forest Department exercises certain checks on the lessees, the nature and extent of which vary from State to State. For example, Andhra Pradesh Forest Produce Rules, 1970 enjoin on the lessees to maintain, in respect of each godown where the leaves are stored, a stock account in Form H, showing the details of the opening stock, the stock added and the stock disposed of, and the closing stock. The lessees are also required to submit to the Divisional Forest Officer a monthly statement showing-

i. The godown where stock is stored

ii. The balance of stock on hand at the time of submission of last return

iii. The stocks added

iv. The total quantity consumed or disposed of and

v. The balance of stock on hand on the date of submission of the return.

22.4 Further, the leaves cannot be moved from out of the Division, unless a transport permit (TP) is obtained from the DFO. Again, movements within the Division require similar permits issued by the lessee or registered contractor as he is called. When a contractor wishes to make a sale, he should obtain the written orders of the DFO. The relevant proceedings of the DFO will indicate the name of the person to whom the registered contractor is permitted to make the sale, and the quantity of the leaves to be sold. At the time of actually transporting the leaves TPs must be obtained in respect of each lot. Valuable information is thus available with the Forest department which could profitably be used while investigating the case of a bidi manufacturer. The information will enable an assessing officer to verify whether all the stocks have been duly accounted for, and more importantly, to trace

chronologically the movements of the stocks, and thereby:

i. To detect the existence of unaccounted stocks, and

ii. To check, particularly in respect of the purchases made at the fag end of the year

iii. To ascertain whether the stocks have been reflected in the closing stock.

22.5 The manner in which bidi manufacturers obtain their supplies of leaves depends on their location. For example, the bidi manufacturers of Madhya Pradesh and Andhra Pradesh may take forests on lease. They may also purchase the leaves from other registered contractors. The bidi manufacturers of Tamilnadu and Maharashtra (where tendu is not grown), on the contrary, have to purchase leaves from other States.

22.6 Where forests are taken on lease, the leaves are plucked by the local tribes. Bidi leaves are generally sold in the form of gaddis (puda). A 'gaddi' contains 70 to 100 leaves. In some districts like Bhandara, bidi leaves are also sold in the form of smaller gaddis known as 'phals' containing 30 to 50 leaves. Apart from the variations in the number of leaves in a particular gaddi, the quality of leaves also varies from place to place. The gaddis are sold to the manufacturers at different collecting centres in the forest called 'phals'.

22.7 The rates of plucking for 100 leaves are fixed by the bidi manufacturers and depend on competition as well as the size of the gaddi. From the 'phals,' leaves are transported to head office. If direct purchases are made, it would be advantageous to analyse the purchase expenses under the following head:

i. Lease money paid.

ii. Expenses of plucking with quantities.

iii. Incidental expenses like messing, salary etc.

iv. Transport expenses.

22.7.1 The plucking rates should be compared with the rates shown by other manufacturers in the same or near-by forests. The expenses of procuring 1000 gaddis directly should also be compared with the rates given in respect of purchases made through contractors.

22.8 Sometimes, manufacturers take lease of tendu forests in benami names, mostly in the names of their employees or associates. If, therefore, purchases from another lessee are shown, such details as who stood surety for such lessee, who supplied the necessary finance, and who actually supervised the plucking of leaves and his relationship with the manufacturer etc. should be ascertained and examined.

22.9 Where the bidi manufacturer purchases tendu leaves from dealers, the purchases will have to be verified on the lines indicated under the heading 'Verification of purchase of tobacco'.

23. PRODUCTION

23.1 The elementary method of verifying the output of bidis is to see whether, judged in the light of standard norms, the quantum of tobacco and bidi leaves consumed bears a reasonable relationship to the number of bidis produced. Normally, one kilogram of tobacco and 5 kg of tendu leaves will yield 4000 bidis. Needless to add, local variations are bound to be there, and the quantum of inputs vary according to the size of the bidis. In Maharashtra (Nashik area), for example, the manufacturers issue 650 gms to 700 gms of bidi leaves for 1000 small (lavangi) bidis, and 800 gms to 950 gms for 1000 big (chalu) bidis. The input of bidi leaves thus ranges from 2.6 kg to 3.8 kg for 4000 bidis, thus exhibiting a marked variation from the

mean. The explanation lies in the fact that, as justly complained by the workers of that area, the leaves issued are insufficient to produce 1000 bidis, and that, lest they should totally lose their livelihood, the workers buy leaves from the market to make good the deficiency. In Andhra Pradesh, about 5.28 kg of leaves are consumed for making 4000 big bidis. Similar variations are noticeable in respect of tobacco consumption also. The AO should compare the average consumption of tobacco and tendu leaves disclosed by an assessee with (i) the average consumption in his own case in the previous years, and (ii) the average consumption disclosed in other comparable cases. This rule-of-thumb approach enables the officer to see whether the matter needs further probe.

23.2 The relationship between the input of 1 kg. of tobacco, and output of number of bidis, can be ascertained by adopting what are called the "constructive" and "destructive" methods, and averaging the results obtained. The "constructive" method consists in ascertaining the number of bidis that can be produced from a kilogram of tobacco, the entire process being done in the presence of the officer. Under the "destructive" method, a reasonably adequate number of bidis (usually 1000) are broken open and the weight of tobacco contained in them is found out. By applying the rule of three, the number of bidis that can be made from a kg. of tobacco is worked out. The average of the results obtained by the two methods can be adopted as a reasonable norm for verification purposes. If in a given case the actual overall output falls far short of the norm, the case will certainly merit detailed examination.

23.3 Wages for rolling bidis are paid on piece rate basis. The manufacturers, nevertheless, collect extra bidis on one count or the other, which are invariably suppressed. The practice followed in Nasik area will help highlight the point. The bidis rolled by each worker are checked twice a day, the supervisor usually picking up the so-called substandard (chatt) bidis, numbering on an average 15 per day per worker. Again, at the end of the day, each worker leaves on his tray 10 extra bidis, locally called "mapari" bidis. The worker of course receives no wages for the 25 bidis. Incidentally, a male worker rolls about 700 bidis and a female worker about 500 bidis per day. 'Thread bidis' is another impost. The manufacturer issues thread to the workers once in 5–6 days. This occasion is a signal for the manufacturer to extract from the worker a bundle of 25 bidis for each bundle of thread issued. 'Transport bidis' is yet another novel impost. A number of factories are situated in interior villages. The manufacturers collect from the workers employed in these factories 25 extra free bidis each day, on the ground that the manufacturers have to incur expenditure on transporting the raw materials to and the bidis from the far off factories. The extra bidis collected under various pretexts go unaccounted in the books of accounts of the manufacturers. In appropriate cases, the AO should examine the workers on this aspect.

23.4 Where the workers employed by the assessee roll bidis in the factory belonging to him close supervision of the workers is rendered easy. Usually a number of supervisors keep watch on the process of making bidis. Even here, some simple or skeleton records indicating the quantum of tobacco, tendu leaves etc. issued to each worker and his output are maintained. It is essential to call for these records and verify them.

23.5 Where the workers employed by the assessee roll bidis at their homes, more elaborate records need necessarily be maintained, because such records serve as surrogate for direct

supervision. These will indicate the quantity issued, the number of bidis produced, and the quantity of tobacco and leaves left with the workers, the wages due/ paid etc. In appropriate case, these records must be called for and scrutinised.

23.6 Most bidi manufacturers employ workers for making bidis. However, lack of adequate factory space, limited availability of supervisory manpower, unwillingness to engage workers beyond a manageable level are some of the considerations which weigh heavily with them when they examine the question of expanding their production. It is here that the method of getting the bidis manufactured through contractors or commission agents is found attractive by the manufacturers. They supply the inputs to the contractors who engage the workers and get bidis made. The contractors are remunerated for the services rendered by them. Naturally they will have to account for the raw materials received, the bidis manufactured etc. Generally the remuneration is related, directly or indirectly, to the output. In such cases, besides verifying the inputs supplied and the output received from the contractors, it will also be necessary to examine closely the basis on which their remuneration is calculated. At times, the remuneration attributable to the undisclosed production may be disguised as loans. Survey operations under Section 133A of the Act can be useful in such cases.

23.7 Large manufacturers usually make purchases from smaller producers. The price paid in such cases must be compared with the assessee's own unit cost. Further, the Investigating Officer should be on guard to detect a manipulation or two that may be resorted to. One is that the assessee may pass off his own undisclosed out turn as purchases from petty producers. Hence, the production details of the latter must be scrutinized closely. Secondly, bogus purchasers may be entered in their names. Here, a cross verification of the assessee's purchases with the books of account of the petty producers will be useful. Thirdly, the petty producers may be benamis of the assessee. In such situations, the investigation must be geared to proving that the ostensible is not the real.

23.8 The records under the Central Excise Act and the Forest Department Rules, and those maintained by the assessee for internal control contain a wealth of data which, if used intelligently, can enable the AO to detect existence of undisclosed stocks. For this purpose, the profile of manufacture for relatively short periods, say fortnights, must be prepared. The details of the stocks of raw materials at the beginning of the period, receipts and issues during the period, and the stocks at the end of the period will enable one to see whether any adverse stock position indicative of the existence of unaccounted raw material stocks exists. Similar details for bidis manufactured and sold will enable one to detect sales outside the books. A co-relation between the details of raw materials and bidis will help in ascertaining whether the assessee has suppressed the output.

23.9 In one case, monthly statements of bidis manufactured and sold were prepared, and it was noticed that in a particular month, the sum total of the opening stock of bidis and the bidis manufactured/ purchased during the month was far less than the sales made during that month. The assessee was not able to explain the discrepancy. It was also found that the assessee had covered up the deficiency by introducing bogus purchases towards the close of the year of account. This highlights the fact that while overall figures of input and output for the year taken as a whole may seem to be unexceptionable, such figures for reasonably short periods may tell a different story.

23.10 The average cost of production of, say, 1000 bidis is another useful index of the fact whether all is well with the accounts. A little elementary costing will give the average cost of production. Thus the cost of the inputs e.g. bidi leaves, tobacco, thread, wages etc. go to make up the cost to the assessee. The average cost of production of 1000 bidis during the year must be compared with (i) the assessee's own cost of production in previous years, and (ii) the cost of production in comparable cases. It must also be compared with the rates charged by the contractors who supplied bidis to the assessee. Normally, manufacturer's cost of production must be less than that the rate at which the contractors supply bidis to the manufacturer, because the latter will include the contractor's profit. If the manufacturer's cost of production is higher, it is a pointer to the fact that the manufacturer had either suppressed the output or inflated the consumption of raw materials, or the expenses. In either case, the AO should examine the matter critically.

23.11 In one case, it was found that the assessee's unit cost of production was higher than that of the contractor who was regularly supplying bidis to him, and that this was mainly due to the higher unit consumption of tobacco in the assessee's case. The assessee had no explanation to offer. Hence, taking into account the excess consumption of tobacco suitable additions were made.

24. WAGES

24.1 Wages are paid to bidi workers on piece rate basis. The payment of wages is regulated by statutes and regulations. Important information regarding the number of workers employed, the wages paid, and the quantum of goods produced can be obtained from the Labour department. Details of labour disputes for adjudication before the Labour department may enable the AO to see whether the assessee had inflated the wage bill.

24.2 A problem arises in cases where in respect of appropriate provisions made in earlier years the assessee claims in subsequent assessment year(s) to have actually paid the sums in question to the home workers. The home workers are large in number, and are dispersed over a wide area. They do not carry any marks of identification. They are unorganised and illiterate. Yet the AO will have to make sure that, without having paid the sums to the workers, the assessees have not doctored the accounts to make it appear as though they had paid the sums to the workers. In other words, he will have to verify whether the ostensible is the real. The task is not easy. The sums payable to workers under such Government orders are substantial requiring the assessee will to introduce large sums of money in books of accounts. The first step is therefore to examine critically the source of the funds. The moneys may be introduced in the form of cash credits/ hundi loans, or merely as realisation of sale proceeds of bidi. Whatever be the mode in which the money is introduced into the books, the genuineness of the money introduced must be examined more critically than usual. Secondly, as large a number of home workers as possible must be contacted and their deposition taken on the specific question whether they were aware of the additional financial advantage coming to them, and whether they had received either from the bidi manufacturer or the contractor or the commission agent any extra money over and above the wages normally paid to them. The assessee must be made to commit on each and every significant detail relating to the precise mode and mechanics of the payments in question, and the AO should cross verify the details. If, for example, the assessee says that the payments were made through the contractor/

commission agent, all the details of how and when the moneys were handed over to the contractor/ commission agent, must be obtained from the assessee. Thereafter, the deposition of the contractor/ commission agent on the significant details of the payments must be cross verified with the assessee's version. It would be a good idea to examine the assessee and the contractor/ commission agent simultaneously on all the circumstances surrounding the disbursement of the sum.

25. LOSSES

25.1 Loss in handling of tobacco, and loss on account the destruction of tobacco unfit for human consumption are generally claimed by the manufacturers. Both types of losses are certified by the Central Excise Authorities. Recently, however, enquiries made by the CBI brought to light the fraudulent manipulation of Central Excise registers with a view to claim bogus loss on destruction of tobacco unfit for human consumption. It was noticed that large quantities of what was in fact good tobacco was shown as having been destroyed. Actually no tobacco was destroyed, and the good tobacco was sold surreptitiously. The Central Excise registers were tampered to support the story of loss on account of destruction.

25.2 The assessee frequently claimed loss of tobacco due to flood or any natural calamity case. Accordingly claimed whole loss in the *P&L* Account without considering the claim allowed by the insurance authority.

26. SALES

Manufacturers whose brands have become popular over a particular area, make sales not only through commission agents, but also to dealers directly from the factory. The rates charged for the two types of sales generally vary. In some cases, it was found that the sales alleged to have been made through commission agents, had in fact been made directly to dealers, at higher rates. It is, therefore, useful to examine some of the purchases of other parties to verify whether they have purchased from the manufacturers directly or through Agents. While examining sales, following points are worth considering:

i. What is the system of sale i.e. whether the sales are through selling branches, or through commission agents or direct to the bidi dealers. In case selling branches exist, whether the sales to branches are at the same rate as to other dealers or at a lesser rate. In case sales are through commission agents, whether commission is deducted from the bills or paid at the close of the year.

ii. Whether the sales are F.O.R. dispatching centre, or F.O.R. receiving centre. This point is relevant where sale rates are compared for different cases.

27. CLOSING STOCK

The valuation of stocks of tobacco, bidi leaves, puddas, and packing materials etc. is also an important point to be considered. The stock of tobacco generally consists of:

i. Duty paid tobacco.

ii. on-duty paid tobacco.

iii. Rawa and garda (dust).

These quantities can be verified with the help of excise registers.

28. BALANCE SHEET

28.1 The Balance Sheets of the bidi manufacturing concerns disclose large credit balances in favour of tobacco commission

agents. It is necessary to get detailed copies of such accounts for verification. The manufacturer requires a large amount of ready cash to pay for the tendu leaves, since he has to build up a whole year's stock between April and June, the period during which the tendu leaves are plucked from forests. The cash book entries relating to this period have to be thoroughly scrutinised, because it is during this period that large amounts of cash are brought in. Again, the cash book entries of those days when huge excise duty is paid to get non-duty paid tobacco released, require scrutiny. In the cases of bidi manufacturers bogus hundi havala entries are also common.

28.2 TCS on Tendu Leaves: As per the provisions contained in Chapter XVII-BB of the IT Act, sale of Tendu Leave is subject to Tax Collection at Source. According to Section 206C of the Income-tax Act 1961, every seller of forest produce is under legal obligation to collect tax from the buyer of such products at the time of such sale. The rates of TCS are as under:

Table 3

S. No.	Nature of Goods	Percentage
1	Tendu leaves	Five per cent
2	Timber obtained under a forest lease	Two and one-half per cent
3	Timber obtained by any mode other than under a forest lease	Two and one-half per cent
4	Any other forest produce not being timber or Tendu leaves	Two and one-half per cent

No collection of tax at source is to be made in case of a buyer, who is resident in India if such buyer furnishes to the person responsible for collecting tax, a declaration in writing in duplicate in the prescribed Form 27C of Income-tax rules (under rule 37C) and verified in prescribed manner to the effect that the goods referred to in the above table are to be utilised for the purposes of manufacturing, processing or producing articles or things or for the purposes of generation of power and not for trading purposes. The person responsible for collecting tax at source under Section 206C has to compulsorily deliver or caused to be delivered to the Principal CCIT or Principal CIT one copy of the Form 27C on or before the seventh day of month next following the month in which the declaration is furnished to him. Thus a manufacturer, producer or a processor of articles or things or power is exempt from the TCS obligation if he has furnished the declaration in Form 27C. This exemption is however not available for a trader of forest produces. It is seen that the declarations received by the seller are not delivered to the department and therefore the verification of the nature of activity or utilization of forest produces by the buyer remain unverified. It is seen that many a times the unscrupulous traders also furnish Form 27C to the sellers and thereby violating the requirement of TCS. This malpractice results in non collection of TCS and also non verification of end utilization of the forest produce by the buyer. The Assessing Officer should bear this practice in mind while doing the assessment of persons dealing in forest produce.

29. CASE LAWS

29.1 The TCS on Tendu Leaves was inserted in Taxation Laws (amendment) Act, 2003 amending earlier statute on the matter of TCS. The Ministry of Finance, Government of India had, in its Circular F. No. 149/160/95-TPL dated 10/01/1996, clarified that mere drying, sprinkling water and bundling of tendu Leaves, a raw material for manufacturing bidies etc. cannot be equated with processing.

29.1.2 The said circular was challenged by Gondia Beedi Leaves Contractors Association, Gondia by filing a writ of mandamus before the High Court, Mumbai (Nagpur Bench) in WP No. 956 of 2019. The contention raised by this association was that they are their activity tantamount to manufacturing and hence provisions of Sub-section (1A) of Section 206C are applicable them. Resultantly, they claimed that the members of the Association are exempted from TCS provisions which collected by the Forest Department of the State of Maharashtra.

29.1.3 The Hon'ble High Court, Bombay, in its decision dated 19/09/2019, dismissing the writ petition, has held that *"once the availability of exemption, where the goods are processed for the purposes of trading or selling to the manufacturer or producer of different articles or things there from, is ruled out under Sub-section (1A), the intention of the Legislature becomes clear to understand the word 'processing', as an intermediary process to qualify the produce, namely, Tendu leaves, for being utilised for the purpose of manufacture or production of article or things therefrom. It is an integrated process of manufacture or producing bidi in this case, from the processed Tendu Leaves, which qualifies for exemption. The placement of the word 'processing' in between 'manufacturing' and producing article or things' under Sub-section (1A) is also significantly indicate such intention of the Legislature. The processing of Tendu leaves in this case may qualify for the purposes of trading or sale, but not for the utilization for the purposes of manufacture of bidis."*

29.2 *Sagarmal Agarwal vs. Union of India* (2000) 158 CTR 44(Ori.) – Held that conversion does not amount to processing;

29.3 *Abdul Sattar vs. Union of India*, (1998) 96 TAXMAN 229 (MP) – Collection and recovery of tax-Profits and gains from business of trading in alcoholic liquor, forest produce, etc.-Whether repeated operations of sorting of tendu leaves, sprinkling of water thereon, drying and then bundling them would amount to 'processing' in real sense as contemplated under first proviso to Section 206C-Held, no.

29.4 *Natwarlal vs. Union of India* (1999) 102 TAXMAN 49 (MP)-Collection of tax at source-Whether process of collection and pruning of tendu leaves does not amount to 'processing' within meaning of Section 206C as nothing new emerges from the process-Held, yes

30. ELECTRONIC CIGARETTE

30.1 An electronic cigarette or e-cigarette is a handheld battery-powered vaporizer that simulates smoking and provides some of the behavioural aspects of smoking, including the hand-to-mouth action of smoking, but without burning tobacco. Using an e-cigarette is known as "vaping" and the user is referred to as a "vaper." Instead of cigarette smoke, the user inhales an aerosol, commonly called vapor. E-cigarettes typically have a heating element that atomizes a liquid solution called e-liquid. E-cigarettes are automatically activated by taking a puff; others turn on manually by pressing a button. Some e-cigarettes look like traditional cigarettes, but they come in many variations. Most versions are reusable, though some are disposable. There are first-generation, second-generation, third-generation, and fourth-generation devices. E-liquids usually contain propylene glycol, glycerine, nicotine, flavorings, additives, and differing amounts of contaminants. E-liquids are also sold without propylene glycol, nicotine, or flavors.

30.2 The benefits and the health risks of e-cigarettes are uncertain. There is tentative

evidence they may help people quit smoking, although they have not been proven to be more effective than smoking cessation medicine. There is concern with the possibility that non-smokers and children may start nicotine use with e-cigarettes at a rate higher than anticipated than if they were never created. Following the possibility of nicotine addiction from e-cigarette use, there is concern children may start smoking cigarettes. Youth who use e-cigarettes are more likely to go on to smoke cigarettes. Their part in tobacco harm reduction is unclear, while another review found they appear to have the potential to lower tobacco-related death and disease. Regulated US Food and Drug Administration (US FDA) nicotine replacement products may be safer than e-cigarettes, but e-cigarettes are generally seen as safer than combusted tobacco products. It is estimated their safety risk to users is similar to that of smokeless tobacco. The long-term effects of e-cigarette use are unknown. The risk from serious adverse events was reported in 2016 to be low. Less serious adverse effects include abdominal pain, headache, blurry vision, throat and mouth irritation, vomiting, nausea, and coughing. Nicotine itself is associated with some health harms. In 2019, an outbreak of severe lung illness across multiple states in the US was linked to vaping.

30.3 E-cigarettes create vapor made of fine and ultrafine particles of particulate matter, which have been found to contain propylene glycol, glycerin, nicotine, flavors, tiny amounts of toxicants, carcinogens, heavy metals, and metal nano-particles, and other substances. Its exact composition varies across and within manufacturers, and depends on the contents of the liquid, the physical and electrical design of the device, and user behaviour, among other factors. E-cigarette vapor potentially contains harmful chemicals not found in tobacco smoke. E-cigarette vapor contains fewer toxic chemicals, and lower concentrations of potential toxic chemicals than cigarette smoke. The vapor is probably much less harmful to users and bystanders than cigarette smoke, although concern exists that the exhaled vapor may be inhaled by non-users, particularly indoors.

30.4 Since their entrance to the market in 2003, global use has risen exponentially. In a 2014 survey, about 13% of American high school students reported using them at least once in the previous month, and in 2015 around 10% of American adults were users. In the UK, users have increased from 700,000 in 2012 to 2.6 million in 2015. About 60% of UK users are smokers and about 40% are ex-smokers, while use among never-smokers in the UK is negligible. Most still use traditional cigarettes, raising concern that dual use may "delay or deter quitting". Most peoples' reason for using e-cigarettes involve trying to quit smoking, though a large proportion use them recreationally. It is commonly stated that the modern e-cigarette was invented in 2003 by Chinese pharmacist Hon Lik, but tobacco companies have been developing nicotine aerosol generation devices since as early as 1963. As of 2018, 95% of e-cigarettes were made in China. Because of overlap with tobacco laws and medical drug policies, e-cigarette legislation is being debated in many countries. The revised EU Tobacco Products Directive came into effect in May 2016, providing striker regulations for e-cigarettes. As of August 2016, the US FDA extended its regulatory power to include e-cigarettes. Large tobacco companies have greatly increased their marketing efforts. As of 2014, there were 466 brands of e-cigarettes, with global sales of around $7 billion.

Source: Wikipedia, the free encyclopedia https://en.wikipedia.org/wiki/Electronic_cigarette

30.5 As on date, the Central Government has banned electronic cigarettes amid growing fears over the health risks posed by vaping, sending shares of conventional cigarette makers soaring.

30.5.1 The Union cabinet has made the manufacture, import, sale, distribution and advertisements of e-cigarettes a cognizable offence.

31. CONCLUSION

Tobacco industry is highly growing industry. It has high tax rate therefore, there are more chances of leakage of revenue. The Assessing Officer has to under stand process of cultivation, procurement and process of tobacco and after collecting the relevant fact of the case and region of assessee decide the line of investigation with help of basic understanding given in the topic.

CHAPTER

19

Tyre Industry

1. INTRODUCTION

1.1 The automobile tyre and tube industry occupies an important position in the economy of the country. Tyres and tubes constitute a major segment of the rubber goods manufacturing industry and consume about 60% of the total rubber used in the industry. At present there are 40tyre manufacturers in the organised sector in India. The domestic tyre industry is growing at the rate of 8% and the production has reached 1800 lakh tyres during the FY 2018–19.

1.2 Tyre is a demand driven product. Its demand depends on demand for automobiles. Within the tyre industry, the trucks and bus tyre segment accounts for more than 70% of the sales.

1.3 Indian tyre industry has proved itself to be versatile. The industry has been successful and quick in absorption of International technology. It has introduced several innovations to apply international technologies/ processes to create tyres suitable for Indian road conditions. The industry has developed a wide product range for diverse uses ranging from a moped/ light motorcycle tyre weighing 1.5 kg to an earth mover tyre weighing over 1.5 tonnes. Except aero and some other specialised categories, domestic production fully meets the indigenous requirements. Ready availability of tyres even in the remotest corners of the country bears witness to the vibrant and large marketing setup.

2. INDUSTRIAL AND TRADE POLICY

2.1 The industry is totally delicensed. No industrial license is needed for starting a tyre industry any more. The requirement for starting a new unit or doing a substantial expansion, is only filing an industrial entrepreneurship memorandum with the Ministry of Industries furnishing details of the proposed investment, number of employees and probable date of commencement.

2.2 Under the present trade policy, all categories of tyre can be exported freely. All categories of new tyres can be imported freely. Free import of secondhand/ used tyres is also going to be possible if per tyre CIF value is above certain levels. All raw materials required for the manufacture of tyres, except natural rubber can be imported freely under the OGL. However, natural rubber is under special import license. It

can be imported but only on payment of duty. Under the Goods & Services Tax laws ('GST'), the tyres are subject to a tax at the rate of 28%.

3. RAW MATERIALS

3.1 Raw materials constitute 60–70% of production cost of tyres. Natural rubber is the most critical raw material. It accounts for about 40% of the total raw material cost. The primary raw material i.e. natural rubber is however subject to levy of GST of only 5%. Apart from rubber, Carbon black (10%), nylon tyre cord (24%) and chemicals (12%) are other important raw materials.

3.2 The input component of industry includes natural rubber and synthetic rubber. The natural rubber component is also sourced from north eastern part of the country and because of prevalent tax exemption in these States, this is one area which could give genesis to possible revenue leakages and may warrant closer scrutiny of such purchases and also payment of commission, if any, in connection with such purchases.

3.3 From the above it shall be noted that the effective indirect tax levy on tyre(after input credit) is substantially high. Such high incidence of tax acts as an incentive to the assessees to evade tax. Hence in order to avoid paying GST and with a view to subsidize its products, the tyre is manufactured out of books and as a consequence results in evasion of income-tax as well.

3.4 However with the advent of the new age information technology and the financial profiling which is now possible with the integrated data mining being seriously pursued and undertaken by the Central Government, the Officers can identify the possible loopholes and areas of evasion of taxes and address the same.

4. RADIALISATION

4.1 Tyres can be divided into two categories—cross ply, and radial. In early 1950s a new concept of tyre design was developed called 'radial'. Radialisation led to higher tread life (mileage) and comfortable ride. It is said that the rate of radialisation is an index of the status of road development, vehicle engineering and the economy in general. By and large the Indian tyre companies have kept pace with the technical improvements that radialisation signifies. They offer state-of-art products comparable to the best in the world. The future of radialisation depends on several factors like cost-benefit ratio, road development, overload control, user education and retreading infrastructure.

4.2 The domestic industry is dominated by cross ply tyres due to the poor conditions of roads and overloading of commercial vehicles. Penetration of radial tyres in the commercial segment is only upto 40% and they command a presence in passenger car segment where radialisation has reached the 95% mark.

5. DEMAND AND SUPPLY

5.1 There used to be a time when tyres were in short supply. But it is no longer so. The supply has grown faster than the demand. The demand is linked to auto demand from original equipment market (OEM) and replacement market. Except in aero and some other specialised categories, domestic production/ capabilities fully meet the indigenous requirements. Ready availability of tyres at retail level even in remote parts of country has been achieved through responsive marketing channels.

5.2 The industry claims that it is almost a buyer's market now and that the bargaining power of the supplier is low due to intense competition from other manufacturers and imports. This led to price wars between the major manufacturers. Large scale retreading also affects the bargaining power of the suppliers. There is fierce competition with competitors adopting a strategy of differentiation. An extensive distribution network and strong brand recall are factors critical to tyre sales.

6. EXPORTS

The demand for tyre is increasing due to exports to neighbouring and other developing countries of Asia. The industry has performed well in the export front with sustained exports for over a decade to more than 50 countries with long-term commitment. All large tyre companies are exporting.

7. DEMAND INFLUENCING FACTORS

7.1 The tyre demand and production are directly influenced by the following factors:

i. Overall economic growth.
ii. Growth in automobile sector (vehicle demand/ sales).
iii. Performance of Railways vis-a-vis road transportation.
iv. Performance of public transportation (State Transport Undertakings).
v. Growth in export of Indian tyres.
vi. Import level of tyres into India.
vii. Level of radialisation.
viii. Level of retreading.
ix. Condition of roads and road related infrastructure.
x. Overloading.

7.2 Overall economic growth, particularly performance of agricultural and industrial sectors has a major bearing on the demand for tyres. Road transportation accounts for over 75% of goods transportation. Growth in agricultural input and industrial production has a direct and positive impact on demand for tyres, particularly in the replacement market. Growth in tyre production can be significantly attributed to an impressive growth off take by OEM in various segments. The addition in the number of vehicle augments the demand for replacement of tyres in subsequent years. A degree of competition and substitutability exists in movement of goods and passenger traffic between the railways and road transport. Railways have a declining share of passenger and freight traffic. This adds to the importance of the road transport.

7.3 The growth in tyre exports from India is depending on several plus factors. Indian cross ply tyres are rated as the best in the world. However, the Indian exports have to compete with cheaper exports from China. Besides, cross ply truck tyres are not taken by the developed countries at the same levels as in the past. The Indian tyre industry has the capability to produce and export radial truck tyres and make good the fall in the export of cross ply tyres. Increased level of tyre imports has an adverse impact on domestic tyre industry. The progressive reduction in import tariff has resulted in sizable imports. Import of used tyres is being permitted but it is not likely to have much impact in view of the floor price mechanism.

7.4 Increased level of radialisation has a negative impact on demand for new tyres in view of long life of such tyres. Similarly, increase in the level of retreading has an inverse relationship with demand for new tyre. The bad condition of Indian roads benefits Tyre Industry greatly. If road infrastructure is improved, it would result in greater acceptance of retreaded tyres. Overloading also affects the life of tyres. Hence the demand for new tyres increases.

7.5.1 Retreading of Tyres: Retreading tyres is the process of restoring old tyres so that they can be used in automobiles. In this method, a worn casing of a tyre that has a good structural quality is taken off and put through a process in which it gets a completely renewed tread and sidewall rubber. After that, the revamped tyre is taken forward for a curing process in which the new rubber is vulcanized to the original casing and hence, the tyres gets newly made tread pattern. Tyre retreading business is a major consumer of natural rubber. It has a direct bearing on the fortunes of the tyre industry. In India a truck tyre is more likely to be a retreaded than replaced with a new one. Indian retreading industry is estimated to be worth more than Rs. 5000 Crores with roughly 20000 retreaders scattered in the organized and unorganized sector. Its

importance can be gauged from the fact that reputed fresh tyre Manufacturer JK Tyres opened its 34th retreading Centre recently. In order to help the industry to grow, GST has been reduced to 18% from 28%. There are comparatively higher margin in this retreading tyre business.

7.5.2 There are several advantages of retreading such as:

i. Retreading are quite safe and are being used in all kind of vehicles nowadays.

ii. Retreading is highly environment friendly.

iii. There are many economical benefits of retreading as the retreading tyres are less pricey in comparision with new ones.

7.5.3 There are also several disadvantages of retreading tyres such as:

i. Retreading tyres are generally a lot less expensive than the new ones, however, after the budget tyres have come into play, the scenario has changed to a large extent. Budget tyres are less expensive.

ii. In retreading, a new lease of rubber is put on the casing of a worn out tyre without changing the cord infrastructure. Hence, the quality of the retreaded tyres always stays a lot down than that of the new tyres.

8. PROSPECTS

8.1 The growth in passenger car sales is expected to increase the demand for tyres. With a string of launches planned in the car segment, demand from OEM is expected to increase considerably. It is expected that this will go to augment the tyre industry volumes. It will also ensure steady demand from the replacement market. Replacement demand constitutes nearly 60% of tyre sales, OEM accounting only for the rest 40%. Since margins are lower in OEM segment, the manufacturers depend on higher volumes to increase the sales growth. Replacement demand from the car segment is expected to pick up further as the second hand car market is buoyant following the easy availability of finance to this segment.

8.2 Presently rising rubber prices have somewhat reduced the operating margins of the tyre companies. The situation is expected to stabilise soon. Government's policy regarding natural rubber imports has immediate relevance to the industry.

8.3 The industry is facing a challenge in the form of cheap import of radial tyres especially from Korea. While the manufacturers are understandably upset, the tyre dealers are not. According to the latter, domestic prices of tyres continue to be very high despite a steep decline in raw material cost over the last few years. They want the industry to rationalize, what they call 'indiscriminate and arbitrary' price structure, and sell tyres at much lower rates. The Automotive Tyre Manufacturers Association representing the tyre manufacturers stoutly denies this.

9. INVESTIGATION OF ACCOUNTS— MANUFACTURERS' CASES

9.1 In the cases of tyre manufacturers, examination of accounts may be made under the following heads.

9.1.1 Purchases: The chief input in this industry is natural rubber. This is purchased directly from the big estates and also from traders who purchase it from the small growers. Earlier the purchase of rubber was not subject to indirect tax levies and only some States would levy VAT etc. In such a scenario it was not possibleto track, verify and examine the purchase of rubber by tyre companies. However under the current GST laws, natural rubber is now subject to a tax levy of 5%. By bringing the natural rubber within the indirect tax fold, the officers can now correlate and examine the purchases made by tyre companies. All rubber suppliers are now required to file monthly/ quarterly returns, which makes tracking of the purchases easy. With the easy bifurcation of purchases from registered and unregistered dealers, the extent of organized business being conducted by the tyre company is now ascertainable. Correspondingly even the sales made to unregistered dealers can be

identified through the GST returns and the same may be targeted for enquiry and investigation to identify under-invoicing and tax evasion.

9.1.2.1 It is further relevant to note that henceforth the movement of taxable goods is required to be undertaken through E-Way Bills generated through the GST system. In the circumstances where the natural rubber moves from the factories/ depots to the tyre factories, the trail of transactions can easily be identified on real-time basis through E-Way Bill Database. Consequently the quantity of goods purchased each month etc. can now be easily identified.

9.1.2.2 It may however be pertinent to mention that E-Way bills are not mandatory intra-State and in some North Eastern States. In the circumstances tracking of purchases from persons who are within the radius of 10–100 kms may be difficult. Nevertheless the industry data may well be taken as a comparable with suitable adjustments to identify and estimate the turnover of the tyre players.

9.1.3 Natural rubber is the primary indispensable ingredient in manufacture of tyre. The quantity of rubber used in production of each size of tyre is constant. Therefore, the assessing officers can track the quantity and amount of natural rubber purchased and accordingly ascertain the expected production by the company. This data can be correlated with the actual production reported by the company and the discrepancies may be enquired into.

9.1.4 Thus, if enquiries could be made into the purchases by tyre manufacturers, one can arrive at a reasonable estimate of the turnover affected. The purchases made from registered and unregistered dealers can be identified from the GST returns. The enquiry & investigation may be concentrated more on the unregistered purchases where they may be scope of bogus billing, false invoicing and/ or tax evasion.

9.1.5 Armed with the above data, the assessing officers can very well correlate the purchases with the sale, undertake quantitative and cost analysis and identify the correct turnover, profitability etc.

9.2 The input material includes numerous chemicals some of which are sourced from relatively small suppliers which at times involve payment of commission which may call for closer scrutiny. Moreover, these chemicals, 10–12 in number may also be examined from the point of view of consumption. It may be relevant to obtain estimated consumption ratio of these chemicals to compare the actual consumption and look for oddity if any on this count.

9.3 The process loss in the industry is said to be around 1.5%. This is another area which may be relevant for scrutinizing the revenue leakage.

9.4 The industry in its books shows substantial amount under the head claim loss/ rejection on account of warranty policy as well as in-house rejection. This area is tax evasion sensitive and, therefore, calls for closer scrutiny to prevent revenue leakage.

9.5 Another tax evasion sensitive area is Scrap Sale. The industry generates scrap both on account of in house rejections as well as on account of rejection relatable to warranty policy of the assessee company. Here, it is pertinent to add that scrap sale is liable for TCS at the rate of 1% under Section 206C of the IT Act. This is an area where there is prime-facie substantial scope for tax evasion. Thus, it may be an area of interest to the Assessing Officer to put scrutiny scanner on such scrap sale.

10. FOREIGN COLLABORATION

10.1 No collaboration agreement with the foreign party is operative without the prior approval of the Ministry of Commerce. Care is needed in reading this agreement. Certain old provisions refer to technical services obtained in exchange for equity shares. Very often the tax angle, on account of valuation of these shares was missed and they escaped taxation. No amounts under collaboration agreements are payable till Government has approved the terms of agreement. Pending final approval of these terms, manufacturing work is continued and provision is made in respect of amounts for

which approval is sought for. These provisions are not allowable because nothing is payable till the Government approves the agreement.

10.2 The collaboration agreements normally contain the Clause whereby the collaborator has a direct say in the matter of buying capital goods. This is one such area where manipulation is possible which benefits both the Indian party as well as the overseas party. Secret agreements are known to have existed whereby the cost of goods (including plant and machinery etc.) was increased by a stipulated amount. By minor variations in these bills, the Indian buyer also was able to accumulate funds abroad which he could use at will. Normally, there is a long negotiation between the Indian party and the collaborator before the final quotation for purchase of goods is accepted. This correspondences made, in this regard, may help in unravelling the hidden facts.

10.3 The tax liability on the foreign collaborator is to be kept in mind. It is to be checked whether TDS has been made for remittance of royalty. The provisions of Section 40(a) should be kept in mind. The deduction for fees for technical services is governed by Section 115A. Here also it should be ensured that TDS has been made during the previous year itself. However, on the basis of verification of 'PE' of the foreign entity, the same should be subjected to withholding tax.

10.4 In addition to the above, the assessing officers should examine the collaboration agreements and its fallouts on a macro basis. The officers should understand and identify the tax structures which are illegitimate and meant solely to evade tax. With the GAAR provisions now in full force to combat such illegal tax planning by MNCs, it is necessary for the officers to look through the agreements and identify the white collar tax evasion being undertaken by the organized tyre players. It may well be noted that due to high indirect tax incidence and comparative higher income-tax rates in India in comparison to other developed countries, there is tendency of MNCs to build structures to siphon off profits outside India and/ or overall reduce the tax liability in India. Many of such tax avoidance methods being commonly deployed have been set out in the Multilateral Convention & BEPS to which now India is also a party. The Officers should therefore examine the tax structures of the MNCs and ensure that they pay appropriate taxes on the income derived in India.

11. PRODUCTION

11.1 Verification of production has a twofold purpose, namely:

- To ensure that the quantity of finished products produced are fully accounted.
- To see whether the input-output ratio is reasonable.

11.2 It is not possible to check each stage of production. The AO would do well to apply the checks exercised by GST authorities which are relevant from Income-tax angle.

11.3 In any investigation into the total quantity produced by a manufacturer, the manufacturer's own system of internal accounting is highly relevant and the AO should have an intimate knowledge of such accounting and use the knowledge to cross-verify the details contained in the statements before him with those maintained by the manufacturer.

11.4 Tyre manufacture has many features common with other industries. Similar problems arise and similar tax issues crop up. All the usual checks made in other cases of manufacture should also be made in these cases.

12. SALES

12.1 Large manufacturers have their own network for the distribution and sale of their products. Tyre industry is no exception. The AO should have clear idea of the distribution channels setup by the assessee. The general principles governing the sales may be borne in mind while dealing with bogus/ unaccounted sales.

12.2 A good chunk of the production is exported to foreign countries. However with grandfathering of Section 80HHC and the

Legislature's intention to phase out other profit linked deductions, there is sufficient incentive for the exporters to suppress the proceeds and avoid tax. The Assessing Officers may therefore ascertain the custom valuation of the goods exported and correlate them with the actual sale price to identify discrepancies and address them.

12.3 In view of the stiff competition in the industry, the manufacturers are particular about quality. Hence, tyres which are having manufacturing defects are generally rejected and sold as scrap. There can be appreciable quantities of tyres which do not come up to the standards but which are not technically defective. These are sold as 'seconds'. It must be ensured that the manufacturer does not pass off good tyres as 'seconds' in his books of account and in the process pocket the price difference.

13. MIDDLEMEN

13.1 Purchases made from middlemen are required to be verified carefully. Bogus purchases introduced by middlemen also need to be verified with the statement showing daily purchases, sales and balance, both in terms of quantity and quality. While verifying sales, the price charged by middlemen for supplies made by them must be verified with the Kottayam market quotations to ensure that there is no manipulation of the quality of the rubber sold.

13.2 The middlemen in some cases may just be dummies setup by the manufacturer. If there is room for suspicion, sustained enquiries and examination of accounts should be made to show the nexus between the two and the lack of creditworthiness of the middleman.

14. SISTER CONCERNS

Transactions with sister concerns need to be looked into with care. Such concerns are interpolated for purchase of raw materials and disposal of waste and byproducts. The rates of purchases and sales made from/ to them should be compared to the market rates. Loans and advances made to these concerns should also be verified.

15. ADVERTISEMENTS

15.1 Brand-building has assumed a lot of importance in tyre business. The manufacturers allot as much as 3% of sales to advertising. Huge expenses are incurred on advertisement on TV, newspapers and magazines, hoarding, endorsements and sponsorships. Specific reference is given to advertisement deal enterd by Appollo Tyres with Manchester United Football Club of EPL. Expenses are also incurred on rally vehicles and payments to race drivers. There is need for cross-verification of these expenses and communication with the AOs assessing the advertising agencies and the beneficiaries. Compliance with TDS provisions on these contracts and payments also should be examined.

15.2 In the organized sector, the payments to advertising agencies, stars, players, international race associations etc. are nowadays often structured in ways to avoid income-tax. Foreign payments to international advertising companies, satellite channels, actors etc. are routed through colourable devices with a view to avoid taxes in India. With the GST on import payments at 18%, there is all the more reason to employ fancy agreements & structures with a sole intention to evade tax. There are also instances where the foreign parent company tends to shift its advertisement costs to the Indian entity with a view to siphoning off profits. The Assessing Officers should therefore carefully examine the branding & advertisement expenses and identify the tax avoidance schemes, if any, put in place by the tyre players.

15.3 Often, capital assets are created for advertisement. In one case, an entire block was added to a stadium. If the asset is going to be under the ownership of the assessee itself, the expenditure may be capital in character. Full details regarding such expenditure such as ownership of the asset should be obtained and scrutinised to determine the allowability of the expenditure.

16. RESEARCH AND DEVELOPMENT

16.1 R & D is essential for the survival and prosperity of any industry. The Act provides for an incentive under Section 35. Section 35 (1) (iv)/ (2) provides for 100% deduction for capital expenditure incurred for scientific research. Only capital additions made during the year exclusively for R & D activities are allowable and not those used in routine activities during the course of the business. This incentive is sometimes misused by the manufacturers. An activity which is not R & D activity is disguised and projected as such activity and 100% deduction is claimed with regard to the capital expenditure including the cost of the buildings and plant. In a major tyre manufacturer's case, the capital expenditure on setting up a facility for manufacture of a special type of tyre was claimed as deduction under Section 35 (1) (iv).

16.2 In certain other cases, capital expenditure on setting up quality control mechanism is claimed as R & D expenditure. The AO should be vigilant about such claims. In cases of doubt he should make a reference to the prescribed authority.

17. INCENTIVES

17.1 Tyre manufacturers get certain benefits in the form of cash subsidy, duty drawback and the like from the Ministry of Commerce. The AO must verify whether the assessee has properly accounted for these benefits and incentives. In suspect cases, reference may be made to that Ministry to find out the fact of receipt and the quantum of the benefits allowed.

17.2 Under the Act, there are several tax benefits available to the tyre manufacturers. These concessions are conditional on the manufacturer fulfilling specific conditions. The AO should ensure that the conditions have been fulfilled. The burden is on the assessee to show that it comes within the exemption provisions and is entitled to the tax concession.

18. In most situations the date and amount of unaccounted sales may not be available unless such accounts maintained by the dealer are recovered during a search or survey. Therefore, one has to make an estimate of the unaccounted circulating capital/ investment by taking into consideration the stock turnover, the period of credit allowed by the manufacturer and the general demand and supply position.

19. DISCOUNTS, REBATES, AND INCENTIVES

Quite often, in their urge to push the sales, the manufacturer gives discounts, rebates and/ or incentives. The discounts are allowed if payments are made within the stipulated period of credit. Rebates and incentives are given if the dealer exceeds the target fixed for him. They are not properly accounted for by some dealers. A comparison/ reconciliation of the dealer's account in the books of the manufacturer and the manufacturer's account in the dealer's books would reveal such credits.

20. VERIFICATION OF STOCK

If on scrutiny, the AO finds that there are discrepancies in the accounts as mentioned above, it is advisable to conduct a survey at the business premises of the dealer and take a physical inventory of the stock. Excess stock would indicate unaccounted investment. On the other hand, if there is deficit stock, it would indicate unaccounted sales.

21. CONCLUSION

The role of road transportation cannot be undermined. It is bound to increase further with the country's economic uptake. The importance of the tyre industry will certainly remain undiminished. The AOs, therefore, should ensure that the industry contributes its fair share to the exchequer.

CHAPTER

20

Vanaspati & Edible Oil Industry

1. INTRODUCTION

1.1 The edible oil, aka Cooking Oil, is a fatty liquid that is physically extracted from several vegetables and also from some animal tissues. This industry can be classified into:

i. Vanaspati manufacturers.

ii. Edible Oil manufacturers (Other than coconut oil).

iii. Coconut oil manufacturers.

1.2 Oilseed crops are the second most important determinant of agricultural economy, next only to cereals within the segment of field crops. The self-sufficiency in oilseeds attained through "Yellow Revolution" during early 1990's, could not be sustained beyond a short period. Despite being the fifth largest oilseed crop producing country in the world, India is also one of the largest importers of vegetable oils today. There is a spurt in the vegetable oil consumption in recent years in respect of both edible as well as industrial usages.

1.3 The demand-supply gap in the edible oils has necessitated huge imports accounting for 60 per cent of the country's requirement (2016–17: import 14.01 million tonnes; cost Rs. 73,048 crore). Despite commendable performance of domestic oilseeds production of the nine annual crops (Compound Annual Growth Rate of 3.89%), it could not match with the galloping rate of per capita demand (approx. 6%) due to enhanced per capita consumption (18 kg oil per annum) driven by increase in population and enhanced per capita income.

1.3.1 There are about 100 Vanaspati Units and 651 Solvent extraction plants/ refineries in the country with an annual capacity to process around 6800 lakh MT of raw material. Due to various reasons, mainly the seasonal availability of raw material the total capacity utilization of the edible oil industry is around 35 per cent as per estimates given by the Solvent Extractors Association of India (Source–India 2019 of Publication Division, Ministry of Information and Broadcasting, Govt. of India).

1.4 Sources of Vegetable Oils

1.4.1 Primary Sources of Vegetable Oil: Nine oilseeds are the primary source of vegetable oils in the country, which are largely grown under rainfed condition over an area of about 26 million

ha. Among these, soybean (34%), groundnut (27%), rapeseed & mustard (27%) contributes to more than 88% of total oilseeds production and >80% of vegetable oil with major share of mustard (35%), soybean (23%) and groundnut (25%).

1.4.2 Andhra Pradesh (groundnut) & Gujarat (groundnut), Haryana (Mustard), Karnataka (G.nut), M.P (Soybean), Maharashtra (Soybean), Rajasthan (Mustard & Soybean), Tamil Nadu (G. nut), U.P (Mustard), West Bengal (Mustard) contributing more than 95% of total oilseed production in the country. India is producing about 7–8 million tonnes of vegetable oils from primary sources.

1.4.3 Secondary sources of vegetable oil: In addition to nine oilseeds, 03 million tonnes of vegetable oil is being harnessed from secondary sources like cottonseed, rice bran, coconut, Tree Borne Oilseeds (TBOs) and Oil Palm. Oil palm which is categorized as secondary sources of oils should be included as primary source as it gives the highest per ha oil yield (4–5t/ ha).

1.5 Area, Production and Yield of Oilseed Crops in India: In India, annual oilseeds are cultivated over 26.67 million hectares of area producing 30.06 million tonnes annually (quinquennium ending 2016–17). Majority of the oilseeds are cultivated under rainfed ecosystem (70%). The area under oilseeds has experienced a deceleration in general, and this is due to their relative lower profitability against competing crops like maize, cotton, chickpea etc., under the prevailing crop growing and marketing situations.

1.6 Import and Export of Oilseeds & Vegetable Oil

1.6.1 Import: India is heavily dependent on imports to meet its edible oil requirements and largest importer of vegetable oils in the world (15% share) followed by China & USA. Of imported edible oils, share of palm oil is about 60% followed by soybean oil with a share of 25% and sunflower (12%). Import growth in respect of edible oils during the last decades is about 174%. The import figure of edible oils during 2015–16 reveals that India imported a total of 15.88 million tonnes of oilseed and vegetable oil products worth Rs. 69331.96 Crore.

1.6.2 Export: As per foreign trade policy, export of edible oils was prohibited over the years. Currently the following exemptions are in place:

i. Edible oils permitted for export in bulk as well consumer packs of upto 5 kgs with MEP.
   a. Groundnut oil, sesame oil, soybean oil, rice bran oil, coconut oil.
   b. Minor forest product oils.
ii. Edible oils permitted for export in only consumer packs upto 5 kgs with MEP of USD 900 per MT:
   a. Olive oil, palm oil, sunflower oil, safflower oil, cotton seed oil, linseed oil, mustard oil.

1.6.2.1 India was never a big exporter of edible oils. India's export basket comprised of premium oils with higher value realization (refined coconut, groundnut and sesame oils) and recently DOC (de-oiled cake) oil meals, castor oil, groundnut oil and sesame oil contributes largest share. The export figure of edible oils during 2015–16 reveals that India exported a total of 8.20 million tonnes of oilseed and vegetable oil products worth Rs. 29527.97 crore.

1.7.1 Olive Oil—An Emerging Segment: India largely imports olive oil from Spain, Italy and Turkey. While India consumes 17 million tonnes of edible oils but the share of olive oil is only 0.1 per cent. More than 90 brands are competing for such a small share of market.

1.7.2 The top three brands in the domestic market, which together control more than 70 per cent of retail sales, are Leonardo, Figaro and Borges (including Cesar). Some other prominent brands include RS, Bertolli, Del Monte, Fragata, Colavita and Athena.

1.7.3 The Indian olive oil market size was valued at $58.6 million in 2017, and is projected to reach $127.5 million by 2025, growing at a CAGR of 9.9% from 2018 to 2025. Olive oil is a viscous liquid that is extracted from the fruit of the olive tree by pressing whole olives. Olive oil has a low smoke point of 240°C and hence can be consumed raw. Olive oil consumption is often considered healthy as it is associated with a lower risk of heart disease and certain cancers including colorectal and breast cancer. Olive oil is also a good source of monounsaturated fatty acid and antioxidants such as polyphenols, vitamins E & K, chlorophyll, and carotenoids. The olive oil industry in India has witnessed considerable growth in the recent years due to rise in health-conscious consumers. The olive oil market has become more competitive and price sensitive due to the high potential and steady growth of the olive oil market.

1.8 Future: Considering the growing domestic demand for edible oils, the staggering deficiency and the cost to the exchequer on account of imports, the urgency of scaling up the oilseeds production does not need over-emphasis. It has now been planned to achieve a production of 45.64 million tonnes (mts) from nine (9) annual oilseed crops by 2022–23, expecting an additional production of about 15.58 mt over and above the 30.06 mt production (QE 2016–17). Thus, the availability of total vegetable oil from domestic production of nine annual oilseed crops would be about 13.69 mts by 2022 (at 30 per cent recovery) as against the current annual output of 7.0 mts.

(*Source: DFI Committee Estimates based on data compiled from DACNET(Except Para 1.7)*)

2. VANASPATI MANUFACTURERS

2.1 The Vanaspati or hydrogenated oil industry in India has a history of over 60 years. The process of hydrogenating liquid oils is to make available more saturated or solid fats, the demand for which cannot be met by milk and animal body fats. The quality of Vanaspati has improved in recent years. Hydrogenation permits the use of the cheapest edible oil available. Selective hydrogenation can suppress those constituents of oil which adversely affect stability or quality of the finished product. Hydrogenation, combined with other processes, permits the production of margarine in developed countries which is superior to butter in flavour, texture, color, spread ability and nutritive value. Similarly tailor-made fats are being produced to meet the specific needs of baking and frying different foods.

2.1.2 A few bigwigs of the edible oil industry are:

i. **Marico:** One of the oldest and most famous edible oil brands in India, Marico, was founded in 1987. Saffola holds the brand name for all Marico's edible oil ventures. Marico has an international presence in over 20 countries including Egypt, Vietnam, Malaysia and South Africa. Brands: Saffola, Parachute etc.

ii. **Adani Wilmar Ltd.:** It is an another edible oil company which came into existence after Adani Group collaborated with Wilmer International. The edible oil manufactured by this company is extracted from sunflower, groundnut, mustard and rice bran. Brands: Fortune

iii. **Agrotech Foods Ltd.:** This company was established in 1986. Brands: Sundrop, Poshan etc.

iv. **Mother Dairy:** This is one of the most popular dairy firms in India and sells edible oil under the brand name 'Dhara'. Some of the Dhara's oil variant includes mustard oil, soyabean oil and groundnut oil.

v. **Vimal Oil & Foods Limited:** This company was established in 1993 and has since been selling different kinds of edible oil under the sub-brand 'Vimal'. The company has built a strong distribution

network, which includes more than 1500 distributers in India. Some of Vimal's oil variants are filtered groundnut oil, refined soyabean oil and refined sunflower oil.

vi. **Bunge Ltd.:** Bunge is the sixth most sold edible oil in the country. It is one the oldest brands, founded in the year 1818. The company had acquired the brand name "Dalda" in 2003 from Hindustan Unilever Limited and uses 'Dalda' as its brand name to sell its products. Dalda is popular for selling multiple oils including soyabean oil, vanaspati, sunflower oil, mustard oil etc. Dalda is one of the most trusted products of the country.

vii. **Cargill:** It is a US based food manufacturing company which was incorporated in 1865, in America. It set its foot in Indian market in 1987 and since been selling some of its popular brands like Gemini, Sweekar, Sunflower Vanaspati, Leonardo, Rath and Nature fresh.

viii. **Ruchi Soya Industries Ltd.:** Ruchi Soya Industries Ltd was established in the year 1986. The company's popular edible oil brands include names like Mahakosh, Nutrela, Sunrich & Ruchi Gold.

ix. **Rasoya Protiens Ltd.:** The Company was established in the state of Maharashtra in the year 1992. The company sells its edible oil variants in brand names 'Rasoya' and 'Sunsafe'. The company is extremely popular in rural India, which is plus point, as more than 40% of India's population resides in rural area. It produces edible oil from soyabean as well as from sunflower.

2.2.1 India is a huge market for edible oils. During the financial year 2017–2018, Indians consumed whopping Rs. 1.3 trillion worth of edible oil of different types.

2.2.2 Further, edible oil constitutes the single largest share of packaged foodstuff: It accounts for over 30 per cent of all packed foodstuff sold in India.

2.2.3 Due to very diverse culinary traditions and tastes, there are different types of cooking oils available in India.

i. Palm Oil.
ii. Sunflower Oil.
iii. Groundnut Oil.
iv. Soybean Oil.
v. Mustard Oil.
vi. Sesame Oil.
vii. Rice Bran Oil.
viii. Olive Oil.
ix. Corn Oil.
x. Canola Oil.
xi. Cottonseed.
xii. Blended.

2.2.4 Depending on one's budget, cooking style, and dietary concerns, one can buy any of these edible oils from excellent brands in India.

2.2.5 Top 10 brands names in Edible Oils in India are:

i. Fortune.
ii. Saffola.
iii. Sundrop.
iv. Patanjali.
v. Emami.
vi. Gemini.
vii. Dhara.
viii. Dalda.
ix. Sweekar.
x. Recon.

2.3 Vanaspati in India is wholesome and nutritive. In the modern Indian markets vanaspati is being used to refer to vegetable oil that has been hydrogenated and hardened. Vanaspati ghee is a cheaper substitute for the

clarified butter that is made from milk. Vanaspati means any refined edible vegetable oil or oils subjected to a process of hydrogenation in any form. It conforms to strict specifications laid down by the Government of India to ensure a high nutritive value. Currently, nearly one quarter of the total edible fat consumption in this country is in the form of Vanaspati. This however varies from region to region depending upon dietary habits. For example, in the North where traditionally hard fats have been in use, Vanaspati consumption is very high but it tends to decrease as one goes south, where the people are more accustomed to liquid oils.

2.4.1 Raw Material: The basic raw material in vanaspati industry is oil. The oils commonly employed are groundnut oil, cottonseed oil, sesame oil and kardi oil. Imported oils like palm oil, soyabean oil and rapeseed oil are also used when available. Indigenous edible grade Rice bran oil is also used. The other raw materials for the Vanaspati industry are Vitamins and chemicals, for example vitamin 'A' & 'D', Phosphoric acid, Caustic Soda, Nickel, Catalyst fullers and Activated carbon. These chemicals constitute only 1% of the total cost of production.

2.4.2 Manufacturing Process: The production of vanaspati oil involves following stages:

i. Edible oils of various types, and qualities, are collected.

ii. Various impurities such as sludge, fatty acid etc. are removed from the oil.

iii. The oil is then bleached, and colours are removed as different types of edible oils contain different colours.

iv. Hydrogen gas is applied on the bleached oil. This is a critical stage of converting oil into Vanaspati. Hydrogen gas is now readily available from caustic soda manufacturers. Hence the process of obtaining hydrogen from water is eliminated.

v. This stage involves de-odorisation of the Vanaspati as different oils give different odours. This stage also includes blending and vitaminisation.

vi. In the final stage, the Vanaspati is refrigerated and packed in tins & pouches as required in the market.

2.4.3 Conventionally, the above process is done in batch process, i.e. vanaspati is manufactured on a batch by batch basis. Hence a fixed quantity of batch would be passed through different stages. Under the latest technology which is the continuous process technology, the edible oil ends up into tins & pouches after processing from the first to last stage. Some of the plants use intermediate technology whereby a couple of processes are done on a continuous process technology, and others on batch processing.

2.5 Process Losses: In the process of manufacturing Vanaspati, losses are incurred at various stages. In order to ascertain the reasonable process loss, it is important for the AO to understand the process employed by the manufacturer. Normally, losses depend on the quality of the oil used, the efficiency of the technology employed, and the quality of caustic lye employed during the neutralization process. For ascertaining the correct amount of losses, the past record of the unit and the losses incurred by other units in the industry employing the same process, should act as an indicator. Reports of laboratory tests, carried out by Vanaspati manufacturer at the time of purchase of edible oil, could be a good evidence of the quality of the oil and hence an indicator of the extent of process loss. A format of 'laboratory analysis report' normally used is as under:

2.5.1 Laboratory Analysis Report of Edible Oil Purchased

Name of Party Report No. Dated._____
Sample No._____

Table 1

Oil		
F.F.A		
Moisture		
Total M.I.V.		
Hold Test		
Flash Point C		
B.T. Test		
Hexabromide Test		
Argemone (Fecl 3 Test)		
Castor Oil Test		
R.I. at 40 C		
M.P.C		
Unsap Matter		
Colour (Y+R)		
Colour after bleaching		
Bleaching ability		

Barrels_____Truck No._____
Remarks_____
Checked by: Chemist_____

2.6 The oil industry has prescribed following methods to analyse oil obtained for sampling:

i. Bottom sample.

ii. Top sample.

iii. Average sample.

2.6.1 The samples of oil are then sent for analysis to laboratory in a locked box. Therefore the above factors also will be useful to process the case.

2.7 By-Products

2.7.1 Soap Stock: The main by product is soap stock obtained while refining food oils. Soap stock is produced in the reaction of caustic soda in the form of lye with the free fatty acid present in raw oils. Soap stock generally contains about 30–50% of fatty matter, the rest being water and impurities, originally present in the oil. Soap stock derived from the pre-neutralised stage is called "soft soap stock", and that derived from post-neutralised stage is called "hard soap stock". Hard soap stock is more valuable to soap manufacturers as it tends to make the saponified product in the physical or chemical sense harder. The disposal of soap stock has a significant influence on the economics of Vanaspati manufacturing. Hard soap stock fetches a higher price than soft soap stock if it is collected and marketed separately. Therefore, if the proportion of hard soap stock sold is larger than that of soft soap stock and the assessee has not maintained a separate account, some suppression of income is likely to result. It may, therefore, be advisable to obtain separate details of two varieties of soap stock obtained during the manufacturing process.

2.5.2 Laboratory test report of Vanaspati

Date:_____

Table 2

Particulars of Analysis	Batch No.
M.P C	
F FA%	
R T Red units	
Colour 1 cell	
Unsap. Matter	
Moisture%	
Vitamin Test	
Acid Value%	
R.I.at 60 C.	
N.E.O Test	
Nickel PPM	
Animal Fat	
Description	
Clarity Test	

2.7.2 Acid Oil: Many Vanaspati manufacturers convert their soap stock into acid oil by treating it with sulfuric acid. As this acid oil is not

susceptible to deterioration in storage, it fetches a relatively higher price. Other byproducts are oxygen, spent bleaching earth, spent nickel catalyst and wash waters.

2.7.3 Oil Cake: Also known as press cake, is the solids remaining after pressing something to extract the liquids, in this oil industry. Their most common use is in animal feed.

3. BOOKS OF ACCOUNTS

3.1 In view of the large volumes involved in this business and the Government controls, the Vanaspati manufacturers are required to maintain detailed accounts with the advent of computerization, most of these manufacturers have computerized accounting systems where the purchases, stock of raw materials, transfer of raw materials to manufacturing process and transfer of semi-finished products from one process to another, maintenance of finished stock record and invoicing are governed by integrated softwares specially designed for this line of business. Here it is imperative for the AO to fully understand the system of accounting and the escape routes, if any, in the software accounting package. Moreover, statutory records are required to be maintained under the local laws and Central laws, for instance, Section 35 of the CGST Act, 2017 provides that every registered person shall keep and maintain, at his principal place of business, as mentioned in the certificate of registration, a true and correct account of:

a. Production or manufacture of goods.

b. Inward and outward supply of goods or services or both.

c. Stock of goods.

d. Input tax credit availed.

e. Output tax payable and paid.

f. Such other particulars as may be prescribed.

3.1.1 In addition, the rules also provide that the registered person shall keep and maintain records of:

a. Goods or Services imported or exported.

b. Supplies attracting payment of tax on reverse charge along with relevant documents, including invoices, bills of supply, delivery challans, credit notes, debit notes, receipt vouchers, payment vouchers, refund vouchers and e-way bills. In the cases under investigation it could be useful to examine and compare the figure of production and sales shown by the assesses with the corresponding figures shown in the GST and other records.

3.2 Purchases: In the case of purchases, there are possibilities of inflation of purchases, particularly if the purchases are made through a concern in which directors/ partners of the purchasing units are interested. The purchase of raw materials requires to be verified with reference to the contracts entered into by the assessee, for finding out whether the purchases have been made at prevalent market rates or there was collusion with the suppliers in inflating the purchase rates. It may also be worthwhile to verify the genuineness of purchases from the books of suppliers. The weekly prices of major edible oils of important markets in the country are published in the annual reports of the Vanaspati Manufacturers Association of India. Therefore, by referring to these reports it should be possible to verify whether edible oils had been purchased at inflated rates.

3.3 Sales: As the Vanaspati has its root in the edible oil industry, the prices of vanaspati fluctuate with the fluctuations in the prices of edible oils. There are different market prices for Vanaspati made from different kind of edible oils. The sale prices needs to be correlated with the market prices of such Vanaspati. Branded vanaspati fetches better price than the normal market price. The premium over the market price depends upon the strength of such brand.

Manufacturers in the industry often appoint firms constituted of themselves or their relatives as selling agents for sale of their products. At times, these agents are 'benami' of manufacturers. The agreement between the manufacturers and the selling agents should be critically examined to find out the real identity of the agent and whether any extraordinary commission, disproportionate to the services rendered by the agent has been passed onto him.

3.4 GST: Oilseeds attract 5% tax under goods and services tax, unlike most other agricultural produce such as grains and pulses that have been exempted under the new regime that is rolled out from July, 2017. The primary list of GST includes oilseeds under 5% tax bracket. But of the two products manufactured after crushing oilseeds, only edible oils will attract 5% GST and DOC (De-oiled cake), the second product, has been put in the nil tax category. Oilseeds used for seed purpose have been exempted from taxation.

4. TAX INVESTIGATIONS

4.1 General Issues: The books of accounts need scrutiny on the following points:

i. Fictitious cash credits and deposits may have been introduced in the accounts.

ii. Credit balances appearing in the Balance Sheet of suppliers etc. need to be confirmed as they may have already been paid out of unaccounted money.

iii. In recent past, numerous cases of "billing agents" have come to light, who in reality, do not do any business but only provide bills of purchase/ sale etc. of different dates, to facilitate the suppression of income. A vigilant eye needs to be kept on the bills produced before the AO for detecting such bogus transactions. An on-site inquiry of suspected parties or inquiry in the market can lead to discovery of true state of affairs. In a case, a "billing agent" supplied bills to various parties in his region. Interestingly, he also supplied the lorry receipts (L.R.) along with his bills of sale. On inquiry, it was found that the vehicle number given in the L.R s were of two wheelers and not of trucks. Thus, an organized racket of bogus billing was unearthed.

iv. Copy of bank accounts of the assessee should be thoroughly examined as these give an idea of the nature of various transaction of sales, purchases, loans, deposits etc.

v. These days all major businesses enjoy bank facilities. Copies of stock statement certified by the owners to the bank are good evidence regarding the stock, sale and purchase.

4.1.1 The GST input credit shown in the accounts should be confirmed with the returns submitted to the GST authority.

i. The genuineness of the credit notes and debit notes, given/ received by the assessee should be examined.

ii. The payment of commission and brokerage in sales and purchase should be inquired with reference to the services provided by such parties.

iii. Abnormal fluctuations in the manufacturing, administrative and sale expenses should be intensively scrutinized.

4.2 Production: Following types of enquiries can reveal suppression of production of vanaspati by manufacturers:

i. The assessees furnish periodical returns in respect of total production and sales to the GST authority. These details may be compared with those furnished to the Income-tax department to find out any discrepancy. Wherever any action has been taken by these departments, the relevant orders should be studied to find whether

any manipulation has been attempted by the assessee.

ii. It may also be useful to obtain invoices prepared while sending the vegetable products from the filling room to the cooling room, and compare these with the registers maintained for GST purposes. Similarly, an examination of gate passes issued at the time of delivery of goods from factory, may show sales which have not been accounted for.

iii. The AO may also detect concealment of production by ascertaining from the suppliers the quantity of packing materials like tins and plastic containers purchased by the manufacturing units.

iv. The invoices made for the transporters indicate the correct quantity of Vanaspati being dispatched. These may be utilised for cross verification. The manufacturers also insure goods against loss or damage while in transit, and the quantity of goods insured can be obtained for verification.

v. Where the assessee seeks to justify a low gross profit on the ground that expenditure had to be incurred under certain additional heads or where there is abnormal increase in certain items of expenditure, the relevance of the same should be examined.

vi. The closing stock of the finished goods should be reconciled with the opening stock, production and the sales made during the year. A proper scrutiny may reveal manipulations made by the assessee to maintain a desired G.P. rate.

vii. The prices shown in the invoices should be compared with those in the market reports published in local newspaper. This may reveal under-invoicing of goods.

viii. Certain chemicals are used in the production of Vanaspati. These are mainly vitamin A, caustic soda, nickel, catalyst, fuller's earth, and activated carbon. It may be useful to obtain information in respect of the cost and quantity of chemicals used by the manufacturer. This can give an indication of the total production, if the input-output ratios are known.

ix. The extent of consumption of electricity by the manufacturing unit has a direct relationship with the total production. Production of vanaspati can be co-related with consumption of electricity. It may be mentioned that for units getting hydrogen from caustic soda plants or steam iron process, the average consumption of electricity could be different.

4.3 Sources of Information: It would be useful for the AO to refer to following reports/ publications-

i. Annual reports of the Vanaspati Manufacturer's Association of India.

ii. Supplement to the Manual of departmental instructions on excisable manufactured products (vegetable products).

iii. Reports of the Food and Civil Supplies department.

5. EDIBLE OIL MANUFACTURERS (OTHER THAN COCONUT OIL MANUFACTURERS)

5.1 General: Edible oils are not only raw material for vanaspati, but also a major cooking medium. A variety of oils are produced in the country. Traditionally different regions and parts of the country had pockets of different types of oil-making industries. For instance, Madhya Pradesh has major soyabean oil manufacturing industries, while Andhra Pradesh and Gujarat has Groundnut oil manufacturing industries. In recent times with the development of transport and communications facilities, edible oil industry has developed not only in oil seed growing regions but also at far flung places where oil seeds are transported for crushing.

5.2 Manufacturing Process: The manufacturing process involves three stages, which is by and large similar for different kinds of oilseeds.

5.2.1 Shelling: For some of the oil seeds such as groundnut, the pods are shelled so that the kernel (oilseed) inside the pods is separated from the outer shell. Some oilseeds do not require shelling as they are available directly in the form of seeds.

5.2.2 Crushing: In the second stage of process, oil seeds are crushed with the help of an expeller to obtain oil. In this process large stock of oil seeds together with oil seed cake are put in the machinery into which steam is passed to make the seeds hot. The temperature is maintained at 30 to 35°C. The hot oil seeds are passed through a roller where they are crushed and the oil obtained is separated from the cake. Steam is let in to smoothen the process and extract as much of oil as possible. The oil thus obtained contains dust particles and the outer skin layer of the oil seeds. The oil is therefore passed through filters, so that it becomes free from dust, sediment etc. The oil thus obtained is put into barrels if the miller has a ready sale contract, otherwise it is pumped into tanks. The miller is able to know how much of oil has been obtained from the processing of oil seeds each day. As and when he has to fulfill his selling contracts, oil is drawn from these tanks to fill the drums.

5.2.3 Solvent Extraction: During the crushing of oil seeds, a byproduct i.e. oil cake is obtained. In spite of the best efforts to recover as much of oil as possible during crushing 6–8% of oil still remains left over in the oil cake. For extracting this left over oil from oil cake, a process known as "Solvent Extraction Process" has been developed. There are some mills which purchase oil cake from various millers, and extract oil from the oil cake by this process after reprocessing, only 1% or less of oil is left over in the cake, which is then called de-oiled cake. In the last decade, there has been technological advancement whereby rapeseed and soyabean are directly processed in the solvent extraction plants.

5.3 Blending of Edible Oil: Oils and fats have many functions in food product preparation. Quality, stability and nutritional features of oils are the most important factors in food technology. There is no pure oil with good functional and nutritional properties and appropriate oxidative stability. Therefore, vegetable oils are modified using different methods to enhance their commercial applications and to improve their nutritional quality. Modification methods are hydrogenation, interesterification, fractionation and blending. Blending of oil combines the potency of two edible oils and offers a balance of fatty acids. Various cooking preparations existing across different ethnicities and regions subject to different cooking temperatures thereby causing deterioration of the oil due to oxidative stress. By blending different types of oils, the consumer can be offered a better quality product with respect to flavor and nutritive value. In the last century, there has been more emphasis on edible oils based on regional production due to traditional taste and flavor preferences in the different regions. Some unconventional oils such as soyabean and palmolein came into production since the last 20 years, which were being accepted by the general public only in their refined form. Blending would also reduce the pressure for regional preferences of specific individual oil, thereby indirectly helping in stabilizing the edible oil price in a country. There are basically three parameters to adjudge any oil as the healthiest cooking oil i.e., ratio of saturated/ mono unsaturated/ polyunsaturated fatty acid, ratio of essential fatty acids (Omega 6/ Omega 3) and presence of natural antioxidants. The oils can be blended even to derive the protective advantage due to the presence of specific ingredients that offer protection against oxidation to improve frying recyclability.

5.3.1 The blending of edible oil is done in appropriate ratios keeping in mind to enhance its nutritive value and other factors as mentioned

above. For example: Saffola Gold, Pro Healthy Lifestyle, edible oil, is a blend of 80% refined rice bran oil and 20% imported refined safflower oil.

5.4 Yields: Different kinds of oil seeds have different rates of yield. Following are the average yields of different oil seeds. These yields are after the oil seeds have been processed ultimately by the solvent extraction plant.

Table 3

Sl. No.	Oil Seed	Average Yield (%)
1	Soyabean	19–20
2	Castor	45–50
3	Groundnut	45–50
4	Rape	39–40
5	Cotton	18–22

NB: After the above yields have been obtained from the oil seeds, oil contents of only 1% and below remains in the de-oiled cake. The other de-oiled cake is useful as cattle feed and chicken feed. Different edible oil manufacturers claim different variations in yields on the grounds that the oilseeds used by them were of a particular quality. Hence, in order to arrive at a reasonable yield in a particular case the above table could be an indicator. However, other facts such as the quality of seeds available generally in the region, track record of the assessee on the yields and the available yields to other manufacturer in the area should also be taken into account.

5.5 Books of Accounts: The edible oil is a business with large volumes and a number of government controls. Hence, it requires a detailed accounting system. With the advent of the computerised accounting all major manufacturers use software to maintain records. It is important for the AO to not only know the software but also to verify the books of account mandated to be maintained under GST Act.:

i. **Gate Book:** In this book, day-to-day purchases of oilseeds are recorded showing the name of the person from whom the oil seeds were purchased, the quantity of oilseeds purchased and the rate at which the purchase was made.

ii. **Purchase Invoices:** These contain full details of purchases.

iii. **Register of Seeds:** The register shows day to day details of the opening stock of oil seeds available with the miller, kernel obtained from decortication during the course of the day (or kernel purchased if the assessee is also purchasing kernel), oil seeds issued for crushing of oil and the balance of oil seeds available at the close of the day.

iv. **Register of Oil:** As in the case of the register of seeds, this register contains details of the opening stock of oil on the day, oil obtained from crushing during the day, oil sold, and the balance available with the miller at the close of the day.

v. **Register of Cake:** For oil cake, which is a byproduct of oil milling, a register is maintained which shows details of stock at the beginning of the day, quantity of stock obtained during the course of day, quantity sold out, and the balance available at the close of the day.

vi. **Registers under GST Act:** These registers are maintained in the forms prescribed by the GST authority.

vii. **Sales Bills:** giving full details of sales made.

viii. **Closing Stock Inventory Register:** Some of the millers do not maintain the registers of seed, oil and oil cake, mentioned above. Instead, ledger accounts are maintained for oil seeds, oil and cake which contain the weight and other particulars. As mentioned earlier, the first weighment of oil or cake is made only when they are sold. The entries in the above registers are however made on the basis of approximate figures.

ix. **Yield Registers:** An output register or yield register showing the weight of oil

seeds issued for decortication and the weight of kernel obtained from such oil seeds, is to be maintained by a miller so that his yield rates can be accepted. Similarly, an output register showing the weight of oil seed issued for crushing, and the yield of oil and cake obtained from such oil seed is to be maintained. As the registers maintained by the oil miller do not contain the particulars expected to be recorded in an output register normally, the yield rates of oil seeds, oil and cake are being estimated in the case of oil millers.

6. TAX INVESTIGATIONS

6.1 The books of account in this industry need scrutiny on the following points:

i. In case of edible oil business, forward transactions of purchase/ sale are common. These should be verified with the market rates prevailing at the time of transaction and should whether these forward deals are genuine transactions or afterthought/ adjustments.

ii. Where the assessee seeks to justify a low gross profit on the ground that expenditure had to be incurred under certain additional heads or where there is abnormal increase in certain items of expenditure, the justification of the same should be examined.

iii. The closing stock of the finished goods should be reconciled with the opening stock, production, and the sales made during the year. A proper scrutiny may reveal manipulations made by the assessee to maintain a GP rate.

iv. Fictitious cash credits and deposits may be introduced in the accounts of the assessee which should be properly scrutinized.

v. Credit balances appearing in the Balance Sheet in supplier's name etc. need to be confirmed as it is possible that they would have been paid out of unaccounted money.

vi. At times, bad debts are claimed by the assessee as per their convenience in the books of accounts. The AO should verify whether the bad debts claimed are correctly classified as bad debts and whether they should be allowed as a deduction.

vii. In recent times, a class of 'Billing Agents' have come into existence who do not carry out actual business but only provide accommodation bills for purchase/ sale etc. A vigilant eye needs to be kept on the bills produced before the AO to detect such bogus transactions. An on-site inquiry of suspected parties or inquiry in the market can lead to the discovery of the true state of affairs. In one case, a billing agent supplied bills to various parties in his region. Interesting, he also supplied the Lorry Receipts along with his bills of sale. On inquiry it was found that the vehicle numbers in the LRs were of two-wheelers and not of trucks. Hence an organized racket of bogus billing was unearthed.

viii. In GST era, the bogus e-way bill/ fake bills racket have been busted though not particular to this sector. The AO should remain alert and check, on sample basis, the authenticity of invoices, issued by lesser known players in the market, to detect bogus purchase. The help of GST authorities may also be taken to sift their database for identifying such fraudsters.

ix. Assessee's bank accounts should be thoroughly examined to get an idea of the nature of the various transactions of sale, purchase, loans, deposits etc.

x. Copies of stock statement certified by the owner given to the bank can be good evidence regarding the quantum of stock, sale and purchase.

xi. The GST input credit shown in the accounts should be confirmed with the returns submitted to GST authority Department.

xii. The genuineness of the credit notes and debit notes given/ received by the assessees should be examined.

xiii. The payments of commission/ brokerage on sales and purchases should be examined to determine the justification for the services provided by the commission agent or the broker.

xiv. Abnormal fluctuations in manufacturing, administrative, and sales expenses should be intensively scrutinized.

6.2 Purchases

6.2.1 At times purchases are shown from out of state or outstation suppliers. The amounts and quantity of such purchases should be verified from the suppliers. The mode of transportation of the purchases made should be confirmed with the transporters. In cases of suspicion RTO authorities can be consulted regarding existence of the vehicles by which the transport took place, to ascertain whether such vehicle had really transported the goods.

6.2.2 Freight charges on purchases, paid through vouchers or by modes otherwise than by an account payee cheque should be closely scrutinized as it can throw light on the genuineness of the goods transported by the said transporters. In one case, the transportation charges were paid by the assessee by crossed cheque which was deposited in the account of beneficiary of the assessee. This in turn led to unearthing of the fact that the purchases relating to the said freight were bogus.

6.2.3 Purchases made by the assessee directly from oilseed growers (farmers), need close scrutiny regarding the identity of the seller, mode of payment, actual possibility of such sale by the seller in keeping with his land holding and the yield of that crop. The proof regarding the physical transfer of such goods purchased from farmers could also play a vital role in ascertaining the true facts.

6.2.4 Under normal practice, the purchases are subjected to laboratory analysis as per the format of report given in this chapter earlier. If the AO verifies such laboratory reports, it shall give conclusive evidence regarding the yields claimed by the assessee.

6.2.5 The rates of purchases should be verified with those prevailing in the market. The market rates are available in local news papers or in the publications of trade associations.

6.2.6 The AO should examine whether any purchases have been made from associate concerns of the assessee and if so, whether these were at prevailing market prices?

6.3 Sales

6.3.1 The assessees are required to furnish periodical returns in respect of total production and sale to the GST Authority. These details may be obtained and compared with those furnished to the Income-tax department to find out any discrepancy.

6.3.2 When the production is transferred from one division to another within the factory premises, a register is maintained for such transfer. This can give an idea of the actual production and sales. The gate passes also should be tallied with the total sales.

6.3.3 The AO may also detect concealment of production by ascertaining from the suppliers the quantity of packing material like tins and containers purchased by manufacturing units.

6.3.4 The invoices made for the transporters indicate the correct quantity of edible oil dispatched. These may be utilised for cross verification. The manufacturers also insure goods against loss or damage while in transit. and the details of quantity of goods insured can be obtained for verification.

6.3.5 The prices shown in the invoices should be compared with those in the market reports published in local newspapers. This may reveal under invoicing of goods.

6.3.6 Some oilseeds like groundnut are available in the form of pods. Hence during the manufacturing process husk is a byproduct. The sale of husk needs to be accounted for in the books of accounts and its quantity needs to be correlated with the total production of oil. Normally, out of 100 kg of groundnut pods 25 to 27 kg. of husk is recovered.

6.3.7 The use of hexene in the solvent extraction plants is also a guiding factor in arriving at the sales/ production of oil.

6.3.8 These days the Government has allowed blending of various types of oil. The sales of each type of oil as a percentage of the blend should be very closely scrutinized with the purchases, production and yield of each oil.

6.4 Sources of Information: It would be useful for the AO to refer to following reports/ publications:

i. Annual reports of the Edible Oil Manufacturers' Associations at local/ state/ central levels.

ii. Reports of the Food & Civil Supplies Dept, and Food Administration Dept.

iii. Local news papers.

7. CASE STUDY

In one case, it was seen that the yield shown by the miller was apparently low. On detailed inquiry and investigation following facts were noticed:

i. The creditors who claimed to have supplied oil seeds were either not in existence or if found they denied to have supplied oil seeds to the assessee company.

ii. The payments were made to such suppliers by cross cheques. On investigation, it was revealed that the cheques were collected by a particular person who was a benami of the assessee company who deposited these cheques in his account and immediately withdrew the amount in cash.

iii. Similarly, huge amounts were paid to fake persons in respect of freight and transport expenses, which on inquiry was found to be inflated. The modus operandi was same as mentioned above.

iv. In depth inquiry was conducted in respect of truck owners/ transporters through whom the goods were claimed to have been received. On inquiry, it was detected that no such goods were delivered through these transporters. The truck owners in their statements denied to have delivered oil seeds.

v. Some of the alleged suppliers had closed their business 15 years back, yet the purchases of oil seeds from them were being shown in the books of accounts. The cheques drawn in the names of such persons were found deposited in the account of the benami persons who in turn withdrew the amount in cash.

8. CASE LAWS

8.1 In the case of *N.K. Proteins Ltd. vs. Deputy, Commissioner of Income-tax* (2017) 84 taxmann.com 195 (SC), the Hon'able Court has held that where entire purchases shown on the basis of fictitious invoices were debited in trading account – Tribunal came to a categorical finding that there were purchases from bogus suppliers and, thus, Tribunal made addition of 25 per cent of total purchases – High Court by impugned order upheld Tribunal's finding- Whether SLP against said impugned order was to be dismissed? Held, yes.

8.2 In *Vijay Proteins Ltd. vs. Assistant Commissioner of Income-tax;* (2004) 2 SOT 116 (RAJKOT), February 27, 2002 the Hon'ble ITAT decided as under:

"Section 271(1)(c) of the Income-tax Act, 1961 – Penalty – For concealment of income-Assessment Year 1991–92 – During assessment proceedings, additions were made on account

of suppressed oil production and bogus purchases – Tribunal confirmed additions on account of low yield and bogus purchases-assessee was not maintaining proper books of account which had been rejected on account of their non-reliability – Whether duty is enjoined upon a person to make a complete disclosure of his income as well as correct disclosure and if disclosure made of particulars of income is incorrect, then also he commits breach of his duty – Held, yes – Whether onus lies on assessee to prove genuineness of any expenditure which is claimed as deduction in computing its taxable income – Held, yes – Whether benefit of principle that mere non – satisfactory nature of explanation furnished cannot amount to proof of falsity of explanation furnished applies in case fact – finding authority reaches a stage where it can only conclude that fact alleged is not proved, which would result that except rejection of explanation furnished by assessee, there is no material to sustain plea of concealment – Held, yes-Whether in instant case, there was ample evidence on record to prove that assessee had claimed deduction of expenses pertaining to purchases of raw material from bogus parties or suppliers and that fact had been duly proved on record and brought assessee within ambit of phrase 'furnishing wrong particulars of income'-Held, yes-Whether assessee had concealed particulars of its income and was liable to be visited with penalty under Section 271(1)(c) – Held, yes"

9. CONCLUSION

As can be seen, the future of this industry is bright and the demand is increasing in leaps and bounds with the increase in population and purchasing power. To meet the domestic requirement, the industry will strategize to increase its production and thus the profits are bound to zoom too. The AO is advised to take cue from the finer points mentioned in the sub-topic "Tax Investigation" and with the help of GST data can certainly frame a good assessment.

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